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ABSTRACT

The following papers (with authors and respondents) were presented at the annual conference of the South Atlantic Philosophy of Education Society: (1) "Teaching Critical Thinking through the Disciplines: Content Versus Process" (John E. McPeck) Respondent--Kingsley Price; (2) "Philosophy for Children and the Critical Thinking Movement" (Robert J. Mulvaney) Respondent--John B. Haynes; (3) "Theoretic Education" (Virgil Ward) Respondent--Ernest Marshal; (4) "A Case for 'Teaching Students to Think Critically' in the Disciplines" (Neale H. Mucklow) Respondent--Roderic Owen; (5) "The Parabolic Critique" (Thomas O. Buford); (6) "Higher-Order Thinking and Intuitive Experience" (Warren Strandberg) Respondent--Samuel M. Craver; (7) "The Buber Model Reconsidered, Reinterpreted, and Recreated" (John R. Scudder, Jr.) Respondent--J. Gordon Chamberlin; (8) "On Making the Education of Teachers Intellectually Sound" (Jeanne Pietig); and (9) "Are There Limits to Moral Education?" (Tom Hawkins) Respondent--John U. Davis. A panel discussion on liberal education and teacher education is also included. (JD)

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Thinking About Thinking

PROCEEDINGS

of the

Thirty-First Annual Meeting

of the

South Atlantic Philosophy of Education Society

Loyola College, Baltimore, Maryland

October 10-11, 1986

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Editor's Preface

"Thinking About Thinking" was the theme for the 1986 Annual Meeting of the South Atlantic Philosophy of Education Society and is duly reflected in the pages that follow. It is entirely appropriate that philosophers of education be involved with this topic, for they can bring to it a general perspective not often found in other disciplines in the field of educational studies. This is not to disparage the contributions of other fields; rather, it is to affirm the vitality of the contributions that come from philosophy of education.

Over the years the Society has enjoyed many noteworthy keynote speakers, but perhaps none has focused attention on the meeting theme so completely as did the 1986 speaker, Professor John McPeck. The major point of his address--that critical thinking is best achieved in education through understanding of "the broad domains of human experience which we call the disciplines"--runs contrary to what many popular proponents of the critical thinking skills movement advocate today. Thus, McPeck sounded an iconoclastic note, for rather than denigrating the necessity of a foundation of facts and information in favor of thinking skills independent of any particular content, he urged that we should be emphasizing content foundations in the elementary school as prerequisites for later, "higher order" thinking at the secondary school level.

In his response to McPeck's address, Professor Kingsley Price agreed that critical thinking as an isolated skill is inappropriate to introduce to young children, for what makes critical thinking critical is that "the person who thinks, thinks about his thinking," and this involves a certain degree of intellectual maturity. Price qualified this to include the proposition that young children can be taught certain subjects, such as the social studies, in ways that limit an uncritical acceptance of nationalistic sentiments. In one sense, then, he argued that some critical skills can perhaps be taught; however, in another sense we can no more teach humans to think than we can teach fish to swim, for thinking is to humans as swimming is to fish: it is part of their natural vocation.

These brief summative statements give an indication of the philosophical interchange that typified the annual meeting, for concurrent sessions were well attended and the discussions lively. As is the case in alternate years, the meeting had the added attraction of the Presidential Address, this year delivered by President Jeanne Pietig, "On Making the Education of Teachers Intellectually Sound." The attractive setting and genial welcome afforded by the Loyola campus and comfortable accommodations made the meeting most enjoyable. All members of the Society will certainly look forward to a return to Loyola College and Baltimore "on the shores of the Chesapeake Bay."

Samuel M. Craver, Editor
February, 1987

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ABSTRACT

TEACHING CRITICAL THINKING THROUGH THE DISCIPLINES: CONTENT VERSUS PROCESS

John E. McPeck
University of Western Ontario

In brief, this paper argues that the only efficacious route to teaching effective critical thinking is through, and within, the standard disciplines. This may seem to some to be a very traditional, if not reactionary, position to take on the question of how to teach critical thinking. But the grounds for this view reside in what I will call a Wittgensteinian view about the ways in which thought is intimately connected to language, if not actually composed of language, and that sophisticated thought (and critical thinking is a sub-set of this) requires the sophisticated use of language. And insofar as the disciplines are composed of different "language games" (a la Wittgenstein), and the disciplines represent the broadest domains of human experience that we know, then learning the language of disciplines is the major prerequisite for sophisticated thought in these broad domains.

The so-called "thinking skills movement" argues that you can teach certain intellectual "skills" that are independent of any particular content (e.g., like being able to type is a general skill which is independent of content); and that these skills can and will transfer across domains. Typical examples of these general skills are to be found in the use of logic, both formal and informal, and also in certain general "problem solving" skills.

The major point of my paper is to expose the several confusions which this view rests upon, and to demonstrate the ways in which the ability to think,

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even in the applications of logic, is contingent upon understanding the complexities of the domain-specific language wherein the problem resides. Thus, the major prerequisite, if not the only prerequisite, of critical thinking is coming to understand, and to think and to speak in terms of, the language of the broad domains of human experience which we call the disciplines. Along the way, and toward the end of the paper, I make several pedagogical observations, and suggestions, for how we might better prepare students to be the autonomous thinkers which we all desire. Among these is the observation that straight-forward receptive learning of facts and information is often denigrated by educators and researchers alike (e.g., Benjamin Bloom); however, I argue that this is to render a serious disservice to this kind of learning because it is not only the major building block of knowledge, but facts are complex things which have connections and logical implications which reach beyond themselves. And the mental weaving of these connections is what education and critical thinking is fundamentally about. Indeed, so-called "higher order" learning is itself predicated on having this broader understanding of how certain facts and information are connected or related to something else. With this as background, I suggest that it is premature to introduce "critical thinking", as such, into the early grades of schooling, and to wait until high school before we begin the process of getting students to criticize and seriously question their own, or other's, point of view. You don't race a pony until its legs are ready for it.

The above is a very brief summary of the major points made in my 24 page paper; however, I think it should suffice as providing enough fodder for the reader to appreciate the interesting, and perceptive, comments made by Professor Kingsley Price.

Because of the policy of the SAPES Executive Committee to secure keynote speakers of outstanding scholarly repute, it frequently happens that the invited speaker delivers material that is intended for publication elsewhere. Such was the case with John McPeck's Keynote Address this year. Following established practice, it was agreed that his paper would not be published verbatim in the Proceedings, but the above abstract contains the essential thrust of his remarks. Professor McPeck's comments were well received and generated lively discussion. Ed.

ON CRITICAL THINKING:

RESPONSE TO PROFESSOR McPECK

Kingsley Price
The Johns Hopkins University

I. Thinking Movement in Mental Acts.

What is critical thinking? Well, first, what is thinking, unqualified? Clearly, it is something done. Not by atoms or molecules as such, nor by stones or trees as such, nor by the lower animals at least to any remarkable degree. Wherever there is thinking, we may always ask, "who does it"; the reply that it is done by a thing of one of the kinds mentioned would be unintelligible. Thinking is done, rather, by human beings, disembodied spirits, and God; the reply that it is done by a thing of one of these kinds would not suffer from that difficulty.

What human beings and other thinkers do in thinking is to engage in movement. Not the movement that is thrust upon a thing from without like the movement of stones rolling down a slope, of trees pushed against by wind, of living human bodies twitching from electric shock or dodging missiles thrown. Thinking is, rather, movement that the moving thing takes part in as Socrates takes part in talking with Euthyphro, Plato takes part in the movement of writing the *Euthyphro*, Picasso takes part in the painting of the Guernica, Horowitz in the playing of the Polanaise Militaire, ---as any of us takes part in the movement of reading the *Euthyphro*, appreciating the Guernica and the Polanaise, of worshipping, buying, selling, voting, and complaining about the weather. Thinking is bodily movement that expresses the consciousness of the thing that moves. It is also purely mental movement like the movement from one image to another in dreams of the night, the musing movement from one part of a daydream to another, of free association from one idea to another, or the movement from one thought to another in an argument. Thinking is movement of consciousness---bodily like reading and writing, or pure like dreaming and reasoning.

What? Is one not thinking, then, unless he moves from one thing to another---if, say, he is uninterruptedly and stationarily aware of just one thing alone? A stone does not move from awareness of one thing to that of another; but if, in the very center, it should become uninterruptedly and stationarily aware of the earth's pressing on it from every side, if it should become aware of just this one surrounding pressure, would it not become a thinking stone? Let us agree that awareness of just one thing is a case of thinking; and let us show the consistency of this view with what goes before by pointing out that the awareness of just one thing is not simply thrust upon a person who is aware, but is one way of his moving to participate in the world---a view that lies at the bottom, perhaps, of the philosophical vocabulary that speaks of *acts* of thinking and of consciousness. A mental act is a person's being aware of some object, purely or with the help of some bodily movement; and thinking, in the broadest sense of the term, is a person's engaging in a mental act or moving from one to another.

II. Critical Thinking, Not Found in Single Acts.

Is critical thinking, then, critical acts of awareness or critical movement from one to another? Perhaps one could say that, but doing so would be quite unhelpful. It would not tell us what critical thinking is because it would not tell us what *critical* is, nor what it is in thinking that is critical---the act of awareness that a person directs toward an object, the object he directs it

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Correspondence: Department of Philosophy, The Johns Hopkins University, Baltimore, Maryland 21218 toward, or the person, himself, who directs his awareness toward an object. We must look into the matter more deeply.

Could a single act of awareness be critical? I mean by "a single act" an act whose awareness is bounded by a beginning and an end, and quite uninterrupted in between. To think of Julius Caesar now, and then again in a minute, is to engage in two different acts of awareness though they are of one and the same object, not in a single act of awareness of that object. A single act of awareness is any act like the awareness of this particular red patch, or of this particular dominant seventh on G, or this particular awareness of the proposition that Julius Caesar was the first emperor of Rome, or this particular awareness of the proposition that Julius Caesar was the first emperor of Rome because he secured control of the army and the provinces. Could such an act be critical wholly within itself, in total isolation from any other act of thinking? Surely not. If it were, the awareness of an object would be just the same awareness of it as the critical awareness of it; if it were, thinking would be the same thing as critical thinking. That would be, as the philosophers say, absurd. To be aware of a red patch, of the dominant seventh on G, of the proposition that Julius Caesar was the first emperor of Rome, or of the proposition that he was so because he controlled the army and the provinces---to be aware of each of these objects in a single act of awareness is not to be critically aware of it, not even in the last case where the cause (or part of it) of Caesar's being the first emperor is revealed.

III. Not in Complexes of Successive Acts.

If a bit of thinking is critical, it must be composed of several successive acts. They must be acts of the same person of course; if they were not, they would not make one bit of thinking, but as many bits as there are persons directing awareness toward objects, or as many, even, as there are acts directed toward them.

Consider one person who is sleeping. His dream is made of several successive acts, but these several successive acts cannot make up a bit of critical thinking. The dreams of the chief butler, of the chief baker, and of the Pharaoh, himself, could not be critical in themselves, but had to find their criticism in a quite separate act---Joseph's act of interpreting them. That psychoanalysts dream that they analyze their own dreams---a tale one sometimes hears---cannot show that their dreams are critical in themselves, but only that analysts dream that they are so. Nor, for a reason of the same sort, can the daydreamer's daydream, however complex, be critical of itself. The daydream of the actor from the daydream capital of the universe, Hollywood--that he goes into politics, secures the presidency, and protects his nation from its evil and conniving emenies with a computelectricolasernucleatiptiptoploftical heavenly shield---cannot be critical of itself, but can, at best, only daydream that it is. Undirected thinking, in itself, is not critical thinking.

But directed thinking, in itself, is not either. Trains of acts in free association are directed by characteristics of the objects thought of, and the trains of awareness that follow the path laid out from premises to conclusion are directed by the premisses toward what they necessitate. Still one can run from 'all men are mortal', through 'Socrates is a man' to 'Socrates is mortal' quite as uncritically as one can move from 'seashells' through 'sailing ships' to 'islands in tropical seas'; and this last movement, in itself, is altogether uncritical. But unless "critical" and "directed" are taken to mean just the same thing, these directed trains of acts of awareness are no more critical than those that lack direction as do dreams, both sleeping and waking. Critical thinking cannot be found in single acts of awareness, nor in complexes of successive acts as such, undirected or directed.

IV. Not in Acts of Awareness, and Not In Their Objects.

Still, critical thinking is surely thinking that is in some way directed. Where, in critical thinking, might this directedness be found? Not in the acts of awareness it contains. These acts, in themselves, show no characteristics whatever. Engaging in them consists in nothing more than presenting ourselves with objects---this patch, that chord, such and such a proposition. Possessing no internal characteristics, none of these acts can be connected with another by virtue of its own nature; and consequently, none is directed toward another. They have relations to one another of course. They occur at certain times, and so precede and succeed one another. But since no act has a characteristic that could distinguish it from another act as such, we cannot say that any one act is directed toward this act rather than toward that act, and hence, that it is directed toward any act whatever. So, directedness and hence the criticalness of thinking cannot stem from the fact that it is made up of acts of awareness.

Nor can the objects that stand forth in acts of awareness make thinking critical by directing its movement from one of its constituent acts to another. Consider the painter's initial strokes. Do not they direct his thinking to those that will complete his picture? And is not critical painting, painting that moves from the painter's awareness of his initial strokes in the direction of the final strokes they indicate? Or consider the propositions in an argument. Do not some of the propositions the thinker is aware of direct his awareness toward another? And is not critical thinking, thinking that moves from the awareness of premisses in the direction of their conclusion? The answer to both sets of questions must be 'No'. The painter and the arguer may think in a thoroughly mechanical or spontaneous way. The painter out of long practice may be painting just one more scene of The Grand Canal or of The Inner Harbor; and the arguer may be thinking quite spontaneously. And mechanical, and spontaneous thinking must be opposed to critical thinking. Besides, critical thinking may go awry. Dr. Johnson who never was, might have been mistaken none the less; and lesser critics are mistaken with great frequency. But thinking that is directed by relations of its objects---aesthetic, logical, or other---would always follow the right path out of necessity.

V. But in The Thinker's Intention to Direct the Movement of Some Person's Thinking, Well.

The directedness of critical thinking cannot consist in the directedness of some of its acts toward others; there can be no such directedness. Nor does it consist in the fact that the succession of its acts conforms to the relations of its objects---not in the fact, as Spinoza might have put it---that the movement from one act to another parallels the relation of their objects; rather, the directedness of critical thinking depends upon the fact that the person who thinks, thinks about his thinking, i.e., about what he is doing. This attention, though required, is not enough however. One might attend to his own thinking without directing it as does the wide awake and careful observer of his own free association. What makes the critical thinker critical is that he attends to what he is doing in order to do it well, not ill. And he does it well where the transitions from one mental act to another yield an awareness of a complex object that is good, not bad. Schubert wrote some of his songs without thinking about his writing them---spontaneously, not critically. Most of us, most of the time, vote without attending to our voting---out of habit, not critically. And most of us infer that Socrates is mortal from 'All men are and he is one' mechanically, not critically. But Brahms pondered over his writing of his first symphony, off and on, for twenty years. Some of us, sometimes, ask about our voting whether it might lead to a better community than would voting differently. And a few of us, occasionally try 'Socrates is a Greek' to show ourselves the validity of our usual inference. Schubert did not try to think well in writing some of his songs; he simply wrote them well. Brahms thought well, also, in the writing of his first symphony; but the thinking he engaged in was full of effort to improve upon earlier stages. And a few of us think well and critically when we check the validity of the famous inference about Socrates by trying one that is invalid. To think critically about thinking is to examine what we are aware of from one time to another with a view to replacing this or that object with another where the replacement appears to present a better whole to our awareness.

Well, no; not quite. That view makes critical thinking always directed toward improving the thinking of the critic. And of course, that is not right. Socrates, a critical thinker *par excellence*, was concerned with the clarity, the validity, and the truth of other people's thinking--- at least in principle. It was Euthyphro's thinking about piety that he was still trying to make into a better whole when Euthyphro remembered that he was in a hurry and must depart. And so, the debater tries to improve the thinking of his opponent, the art critic that of the painter, the music critic that of the musician, etc. etc.. Let us say, then, that critical thinking is thinking about somebody's thinking in order to discover how one part should be connected with another in such a way as to make the whole of the objects revealed in awareness as good a whole as possible---as useful, as beautiful, as right, as probable or true, as consistent as it can be.

VI. No Such Thing as Critical Thinking in General, or It's Skill, only in Particular.

Notice an interesting corollary. Critical thinking need not be good thinking. It must be thinking that the thinker tries to do well. But trying need not succeed, and critical thinking need not be thinking well. The student of composition may think critically in writing his exercise in fugue. Still, his fugue, in the harkening to it, will almost certainly fall far short of all of Bach's, many of which, almost as certainly, were written without a single moment's self-conscious self-direction. The earnest student of history may show great critical care in writing his term essay; but, all the same, the evidence for his thesis may be inadequate or marshalled without clarity. The critic of Darwin's thinking may examine his data in minute detail, but still be mistaken in his judgement of the propositions Darwin found them to support.

A second corollary is that critical thinking differs enormously from one context to another. To try to think well about melodies, chords, and transitions is to try to bring into one's awareness a good musical composition. To try to think well about the coming election is to try to find a good way to vote. To try to think well about propositions describing the transition from republic to empire is to try to bring into one's awareness a good description of that segment of Roman history. And to try to think well about the positive integers is to try to bring into one's mind a good set of propositions about them. But the goodness of a musical composition is quite unlike the goodness of voting which is it's obligatoriness; the goodness of voting is quite unlike the goodness of an historical essay which is the truth or probability its theses borrow from their evidence; and the goodness of an historical essay is quite unlike the goodness of a theory of the positive integers which is its coherence with its postulates and primitive ideas like 'zero', 'successor of', etc.

A third corollary is that there can be no such thing as critical thinking as such, or in general. The goodness that the critic aims at in his thinking differs with the kinds of objects he would make a whole of; and the criticalness of his thinking from one kind to another can be the same only in the trivial sense that the same word, "critical", is used for its description. How clearly mistaken it is then, as Professor McPeck has pointed out, to identify critical thinking with one of its disparate epiphanies like the clarification of the meaning of words and sentences, the correct assessment of statements, or even (what is slightly less mistaken) the effort to clarify or to assess correctly!

A fourth corrollary is, perhaps, the most important for our purposes. There can be no such thing as the skill of thinking critically. A skill is an ability to do something well like the skill of watch repair, of adding numbers, and of analyzing arguments. Now, an ability can be understood only in terms of its doing; there is no way to distinguish one ability from any other except by reference to what it is the ability to do. There is no sense to the notion of an ability except what is borrowed from the notion of its exercise. Consequently, there is no sense to the notion of an ability to do something well that does not depend upon the notion of what is done---and done well or ill. And the skill of critical thinking can be nothing more than the ability to think well about thinking---musically, morally, historically, mathematically, etc.. And since these are different abilities, each from the others, there can be no such thing as the skill of thinking critically taken generally, in abstraction from all the various good wholes that thinking would construct. And even if there were, its exercise could not guarantee success since critical thinking, itself, like thinking unqualified, might always go astray.

VII. A Difficulty in McPeck's Argument For This View.

And so, I have come to one of Professor McPeck's theses: that there is no such thing as critical thinking in general. He comes to this view through the Wittgensteinian analogy of language with games, and the assumption that thinking and language are identical or parallel.

The analogy, I believe, runs like this. A game is an activity of using toys, defined by its rules, to achieve an objective understood also in terms of those rules. Chess is the activity of using pawns, knights, etc.---defined by the rules for moving them---to achieve checkmate, understood in terms of the rule-governed moves that precede it. But there are many games, each with its own set of rules, its own toys, and its own objective to be accomplished by using them. One cannot play one game, therefore, by using the toys of a second. To set up rules and toys for playing a game in general would be nothing more than to establish another game with its own rules, toys, and objective. Now language is like a set of games. It is a set of activities, each consisting in the use of words, sentences, etc. (it's toys), determined by a certain set of rules, to achieve an objective also determined by those rules for using those words, sentences, etc.. The historian uses his words for achieving his objective, an historical record; the physicist, his words for realizing a description of the physical world; the theologian his, for achieving a theology, etc.. And the historian could no more write in the language of physics than could the physicist in the language of theology. And a language for talking in general like a game for playing in general would be just another language alongside history, physics, and the rest; or it would be nothing at all.

But thinking is identical with, or parallel to language; and so, while there are many separate ways of thinking or subjects to think about, there is no way of thinking in general, or general thinking about any subject whatever. And since there is no way of thinking in general, there is no such thing as critical thinking in general---no such thing as critical thinking, applicable in all contexts.

The analogy, 'language-game', is widely influential; and if there is not an identity, there surely seems to be a parallelism between language and thinking. Still, I think the concept, 'language-game', really does not help much in talking about thinking because the concept, 'game', on Wittgenstein's view, is quite unbounded. No finite list of characteristics can give us the characteristics that are necessary for an activity's being a game; and if that is so, to say that speaking or language is like playing a game cannot tell us very much about what language is. And if that is so, insisting that thinking is identical, or parallel with language cannot give us much information either.

To reach the thesis about no critical thinking in general, by the shorter route of noticing the different kinds of goodness toward which critical thinking directs itself is to expose one's argument, I believe, to fewer possible attacks.

VIII. Teaching to Think Critically Should Start Early in Some Cases.

Can the schools teach people to think critically? Clearly not if teaching them to think critically is to teach them to think critically in general, since there can be no such thinking.

But what about teaching them to think critically about particular subjects? Professor McPeck argues that the schools can and should; but only after they have laid a good basis for the student's non-critical thinking in his knowledge of established subjects---what he calls "normal rational thinking". Students should be taught something of the fine arts, morality, the social, natural, and mathematical sciences, etc. without a view to criticism of them in order that they should have some material to think critically about; and teaching students to think critically about these subjects is not teaching them logic which is just another subject---the subject, perhaps, of abstract possibilities. Rather, it is encouraging them to consider one established subject or another to see how its parts might be altered to make a better whole, or whether they already form a whole that cannot be improved upon.

I would qualify this late introduction of encouraging critical thinking. The purpose of teaching in the schools is to transmit culture from one generation to another with a view toward improving human life. For this purpose, some subjects should not be taught critically at an early age because there is little questioning of them at that age, because there is little room for correction in them, and because they are useful in improving human life. To encourage fourth graders to consider the question whether three comes after two, or three times two is six, would be absurd although similar questions might well occupy the thought of mature logicians; and it would be un-useful because it might bring them to confusion and doubt about what they need to know in order to live well.

Other subjects, the student should be encouraged to be critical about from the very beginning. In almost every lower school in almost every nation, the social studies present that nation's culture as the best, that nation's wars as holy, that nation's military leaders as paragons of virtue, and, though not so often, that nation's art as supremely good. Established early, these nationalistic beliefs are never corrected in most cases. They deceive the believer into welcoming every war in prospect, and into justifying it after the fact. They form a good part of the basis for the enormous enterprise of multi-national or universal destruction and preparation for it that preoccupies almost all the human race in these latter days. Such nationalistic sentiments, established in school subjects, cannot be dis-established by mature reflection except in unusual circumstances. And the subjects of art, history, literature, sociology, career planning, etc. into which such injurious beliefs enter should surely be taught critically from the very beginning.

IX. Interpreted in one way, it might succeed.

Let me add a casual observation on the literature of teaching critical thinking. Those who advocate it often seem to me to have something quite different in mind from what Professor McPeck and I have in mind when we use the phrase, "critical thinking". For Professor McPeck, critical thinking is thinking about the thinking about a subject in a skeptical way---looking toward improvement in the thinking about it if possible. For me, critical thinking is thinking about the thinking about a subject with a view toward making it as good a whole of thinking as possible. I believe we have much the same thing in mind.

Now, many psychologists and educationists mean by "critical thinking" nothing more than good thinking; and by the "skill of critical thinking" not the ability to do good thinking well---a redundancy if not a solecism, but the ability of arranging well the circumstances within which people of a given sort learn most, or most thoroughly, or most quickly, or something like that. So, the skill of critical thinking sometimes refers to the ability of arranging a social context well, e.g., of arranging students in groups to work at solving problems, or the ability of arranging the elements of individual psyches well, e.g., of re-aligning or altering attitudes toward a subject, toward learning it, etc.. For many psychologists and educationists, teaching a skill of critical thinking is teaching people to arrange their lives so that they will contain those circumstances, both social and personal, within which good thinking may occur. This teaching, of course, consists in establishing such circumstances in the classroom in order that the student, having found them there, may carry them from it into his life in general. Whether there can be teaching of a skill of critical thinking in this sense of "skill" is an empirical matter. There may well be circumstances within which students of a given sort think better about war or history or physics than they do outside them. We may hope fervently that there are, that psychologists will discover them, that they will be brought into our classrooms, and that students will carry them thence into their lives in general.

Still, even if our teaching should be thus reformed, we could not teach people to think or to think critically in an important sense of "teach". To think, i.e., to engage in mental acts and to move from one to another in the ways that are appropriate to different kinds of thoughtful wholes---aesthetic, moral, cognitive, logical, etc.---to think is an ability we have by nature if we have it at all. Teaching might arrange circumstances that encourage its exercise, but it cannot produce the ability whose exercise it might thus promote. Swimming is an ability men do not have by nature; and, consequently, one may teach it to another by producing it in him---by bringing him to engage in the movements that compose it. But the fish swim by nature, and nothing can produce the ability in them since they possess it on their own. It makes no sense, therefore, to speak of teaching them to swim in the way in which it makes no sense to teach the tides to roll. It is nonsense of the same kind to speak of teaching the ability to think or to think critically. As John Locke might have remarked, God did not make men bipeds, and leave it to psychologists and educationists to make them thinkers or even critical thinkers. Those movements mark their natural vocation.

PHILOSOPHY FOR CHILDREN AND THE CRITICAL THINKING MOVEMENT

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Like a great sea, critical thinking has in recent years washed over educational theory and practice in this country and abroad, threatening to engulf all our fondest fashions and fads. Not since basic skills burst on the scene have we been so threatened. In fact the jargon is suspiciously similar. We have known for years that Johnny can't read, write or count. Now we have learned to our horror that he can't think either. The response has been predictably massive. Vast national and international conferences have convened from Harvard to Sonoma. Huge, neatly packaged courses have been developed to assist the harried teacher in the latest of her responsibilities. Computers lag not far behind and soft-ware packages sprout like the proverbial asparagus in May. One I saw recently promised a "Socratic dialogue" between student and his user-friendly program. One wonders what one-on-one metallic irony lies below the surface of that one!

Of course, like all such perceived crises, the Crit Think crisis has its grain of truth too. And there is sufficient evidence that students these days lack rudimentary conceptual and inferential skills. They also seem less creative and independent than we would like them to be. An imbalance in the pursuit of valid educational objectives has led to too great stress on testing, the right answer and memorization in the past fifteen years or so. Back to the basics itself, admirably designed to counteract some of the unstructured experiments of the sixties, has gone too far, and the gains made in literacy and numeracy have led us away from other equally praiseworthy goals, among them following a train of argument to the right answer, as well as knowing the right answer.

But, as a number of philosophers and psychologists have observed, before the pendulum swings once again too far, policy makers, administrators and teachers had better take a close look at thinking skills and raise some fundamental questions about what the term means and how it is to be applied in the day-to-day experience of the classroom. I want to examine today three worthy individuals who think critically about critical thinking. They are John McPeck whose Critical Thinking and Education[1] has raised our consciousness considerably about this issue, Robert Sternberg, whose recent Phi Delta Kappan articles[2] add a further dimension to doubts about the usefulness of many critical thinking materials, and finally the indefatigable and apparently deathless Mortimer Adler who recently delivered himself of a brief but elegant broadside against the movement in the pages of Education Week.[3]

At the same time I hope to show that the major criticisms these men make against critical thinking programs fail to score against one of them, the Philosophy for Children program developed by Matthew Lipman, with which I have been working in schools in South Carolina for the past few years. In a meeting of SAPES two years ago, I introduced this program and described it in some detail.[4] I shall be briefer today, hoping that most of you will know something about the program. Basically, Philosophy for Children is an integrated program in reasoning skills and philosophical inquiry designed for children in the elementary, middle and high schools. It was developed some fifteen years ago by Prof. Lipman (and thus interestingly antedates the current hysteria over thinking skills) and has been implemented in some form or other in over 4000 schools nationwide and abroad. It consists of a series of novels, written at grade-appropriate reading levels, in which children dialogue among

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themselves and with various constituencies of adults about basic philosophical issues, the nature of humanity, issues in the theory of knowledge, ethics and even questions of ultimate destiny, such as the existence of God and life after death. In the course of their discussions, they discover and master certain reasoning skills including formal and informal inference, classification skills, concept development and definitional skills among them. I shall argue that this program satisfies many of the demands of critical thinking enthusiasts, but as philosophy, it avoids many of the criticisms levelled against critical thinking programs in general.

Let me turn first of all to McPeck. I shall concentrate in this paper on the skillful summary of his major objections to Crit Think found in his article "Critical Thinking and the 'Trivial Pursuit' Theory of Knowledge"[5] In this article he presents us with three demurrers: (1) Thinking is never found in isolation and should not be so taught. It is always about something, and should be taught rooted in some object, some content. As he says in his article:

> I thought it important to point out that thinking, let alone critical thinking, is always about some particular thing or subject (let us call this thing X), and that it therefore makes little or no sense to say "I teach thinking *simpliciter*," or "I teach thinking in general but not about anything in particular." All such talk is literal nonsense.[6]

(2) A second objection concerns the possibility of formulating and teaching "generic" thinking skills. McPeck, observing the wide variety of types of thinking found in fields as disparate as poetry and the sciences, insists that thinking is subject-specific, and that the skills necessary for success in one field are not necessarily adequate for thinking well in others. He writes:

> ...an effective thinker in one area is not necessarily an effective thinker in all other areas. For example, while Einstein could communicate remarkably in physics he was rather inept at poetry. I have suggested that this is because the knowledge and skills required for the one activity are quite different from the knowledge and skills required for the other.[7]

This objection has important ramifications in the area of skill transfer. McPeck argues that studies have demonstrated little carryover of skills from one subject area to another. The danger is that courses in thinking will make children better at courses in thinking, and not at courses in thinking about history or mathematics. (3) A final objection (and one apparently that will form the content of McPeck's paper at this conference) concerns the possibility that we may, like critical thinking Monsieur Jourdains, have been teaching critical thinking all along without knowing it. When we analyze the concept of good thinking we find a kind of independence of thought, a healthy "reflective skepticism", and the relevant knowledge to support these habits of mind. And this entails, McPeck thinks, the major ingredients of a good liberal education. Thus training in the classic subject areas of the liberal arts will produce the critical thinker, and no courses in Crit Think can or ought to be designed to produce these desiderata.

I find the major thrust of this critique persuasive. Since getting into Philosophy for Children, I have observed a paralyzing surfeit of critical thinking materials. (For those of you interested, some of the best of these are described and analyzed in recent volumes by Paul Chance, and Raymond S. Nickerson et al.[8]) I find in most of them a hit or miss abstractness in the choice of skills and the exercises to reinforce them, a hodgepodge of topics, including everything from vocabulary building to chapters suspiciously resembling SAT coaching courses. Claims are repeatedly made that these programs will make the student a better thinker in general, and the subject areas are chosen as a result from problems in geometry to problems in driver education. I am also appalled at the misinformation found in the areas of formal logic and many odd characterizations of the range of rhetorical devices included within treatments of informal fallacies. Since textbooks tend to plagiarize other textbooks, I wonder if false information in these areas will be so well learned by the time kids get to college than your job and mine will be considerably more difficult within the next ten years or so.

At the same time I have reservations, particularly as these objections are applied to programs like the Philosophy for Children program. Let me examine each in turn from this peculiar perspective. First of all, to the claim that thinking is always about something, and is never found in isolation, it is notable that reflective thinking is thinking about thinking. In an important sense this is a unique reflexive subject matter, distinguishable from such things as thinking about thinking about history, or thinking about thinking about literature. In one sense such thinking is generic and content free. In another sense it is specific, thinking about a certain object, namely thinking itself. More interestingly, thinking about thinking is a stock way of characterizing philosophical thinking, or at least some of it. And McPeck's objection surely misfires here. Whatever one may say about the emptiness of critical thinking, such programs as Philosophy for Children involve a clear delimitable subject area, namely philosophy. The range of problems traditionally claimed by philosophy, problems about the existence and nature of God, humanity and the physical universe, are the special content of this program. In the course of such instruction a wide range of thinking skills is covered. But, clearly, such thinking is not "thinking _simpliciter_," whatever that could mean. It is thinking about some X, where this X is philosophy. Of course, one of the unique properties of philosophical discourse is that one tends to run into it in virtually every other area of human discourse. Philosophical problems pop up in the arts and sciences, in everyday life. It follows, then, that philosophical inquiry can effectively be done with any experiential input, and can consequently be "plugged in" to any curricular area, wherever a given teacher finds it useful and convenient. Philosophy for Children finds itself, like many thinking skills programs, applicable across the curricular board, not because it is _simply thinking_, but because every aspect of the curriculum has a foundation in philosophy.

McPeck's second major point involves the existence of generic thinking skills. If there were such a thing as thinking in general, it would likely follow that there are generic thinking skills as well, universally applicable to any and all subject areas. McPeck doubts there are such things. Since thinking is always about some object, the skills involved will vary, he insists, with the object under scrutiny. Thinking in the sciences then will demand a different set of skills from those involved in thinking about the arts. Here again it is likely that his objection is sound. But it can be carried to extremes and lead to some rather embarrassing and absurd conclusions. Surely he would not wish to maintain, for instance, that every particular act of thinking carries its own set of rules. They wouldn't be rules under those circumstances. But it is frequently difficult to see that a given act of thought is subsumable under a given type of thinking analogous enough with it to warrant using a certain rule or set of rules. And even where we might agree, for instance, that a given thought belongs within poetry or physics, and is therefore subject to the thinking skills of poetry or physics, the possibility of unworkable crowds of discrete subject areas still exists. To put the point another way, aren't the skills involved in biology close enough to those involved in physics to warrant the development of a single set of thinking skills for these two areas? Similarly, if poetry and the other fine arts share certain thinking skills, can't we describe these as at least relatively generic? Or must we say that the skills involved in chemistry are as different from those involved in the other sciences as all of them are different from the skills involved in drivers ed. or P.E.? Surely this is only to a degree less chaotic than the specter of a skill for each act of thinking. It seems to me that there are families of thinking skills, some of which are of very broad application, some of more narrow application. Broadly applicable thinking skills would include formal, deductive logic and perhaps much of inductive inference. So-called informal logical skills are considerably more content specific. Some, like the argument from authority, are radically subject area dependent. Others, like the *ad hominem*, are less so. Certain other types of thinking probably have no rules at all, such as the imaginative beginnings of creative processes, or brainstorming. In general I think McPeck overstates his case at this point, and his relative indifference toward formal logic, while seemingly part of his argument and derivable from it, actually points to a major counterexample. Formal logical operations are applicable across a wide area of subject areas. Surely for this reason they ought to be part of the curriculum somewhere. Philosophy for Children claims that the best place for them is in philosophy, where they originated in a formal way anyway, and where a vast number of useful examples of their application are found.

Let me mention at this point that, although McPeck may be familiar with a great number of studies indicating that transfer of skills from one subject area to another has been notoriously undemonstrated, I am familiar with some studies which show that Philosophy for Children supports the development of skills in mathematics and linguistic skills. Reading comprehension, in particular, seems to enjoy marked improvement where supplemented by this particular thinking skills program. On the other hand we seem to have taken it for granted that subjects such as mathematics turn out good thinkers and have effects across the curriculum. But, indeed, this seems not to have been tested all that convincingly. Of course the thinking skills phenomenon is too young to have been tested adequately, and I for one am somewhat suspicious of existing studies. But I think we should maintain a wait and see attitude here. Theoretically some skills are more applicable to wide areas of knowledge than others, and it seems that the habits of close reading and argumentation so much part of traditional philosophy should have salutary results in most curricular areas. The whole area of transfer is a difficult one, and should be studied closely.

McPeck's third point, that critical thinking, whatever it is supposed to mean and whatever it is supposed to deliver, is and ought to be part of the traditional liberal arts course of studies, both as found in its fullness in colleges and universities, and as anticipated in elementary and secondary programs of instruction. And here I find myself in full agreement with him. A program involving philosophy as a conspicuous feature, moreover, is clearly likely to induce the habit of "reflective skepticism" so close to what we certainly include within any well-developed concept of critical thinking. Again I look forward to his development of this point in his address later on today. But, in the meantime, my only additional point would be that philosophy is unjustifiably restricted to higher education. I think this has been our practice because of a set of philosophical and psychological dogmas as old as Plato, a set of Baconian idols concerning the likelihood that only old men, supremely well-trained and working alone, can be much good at philosophical inquiry. Philosophy has always been treated as an elite discipline, accessible to only a few chosen Brahmins of learning. I think all of this is simply false. Philosophy can be and ought to be anticipated in the earliest moments of a person's education. Bruner's bold claim that "...any subject can be taught effectively in some intellectually honest form to any child at any stage of development,"[5] is to the point here. Developmentally, growth has been conceptualized on the model of stages or ladders. But Dewey (and to a degree Piaget after him) preferred the metaphor of the spiral, where educational development revolves around a fixed point, returning to its original position, but always more profoundly and with greater richness. Philosophy too ought to be modelled on the spiral, with a child's philosophical training beginning as soon as she can use the word "why" and as soon as she seeks to fulfill her basic instincts to a rich, full and happy life. And this is certainly long before late adolescence and adulthood.

McPeck is intriguingly silent about the Philosophy for Children program and directs his criticism to such relatively small game as CoRT and the informal logic movement. But he does have one or two things to say about Phiilosophy for Children in his book and I want to consider them at this point, before passing on to some briefer remarks about Sternberg and Adler. Towards the end of his book, he makes two claims relevant to the Philosophy for Children program.[10] The first is that, even if developmental psychology points to the possibility that young children can be exposed to critical thinking skills and philosophical inquiry, it by no means follows that they ought so to be introduced. This rather straightforward application of the problem of fact/value inference is unobjectionable. Certainly the facts of psychological study do not by themselves constitute a sufficient justification of curricular content. I suppose small, supercharged automobiles could be developed, manipulable by toddlers. But it would not follow that they should therefore be exposed to interstate driving conditions. At the same time, such developmental study ought to be part of the story. Small children are in fact capable of rather sophisticated logical operations. It may be the case that the burden of proof lies on those who argue such skills should be ignored in the schools rather than on those who claim they should be added to the curriculum. Similarly, small children raise questions of "ultimate concern". Should they be told that they shouldn't ask such questions? It seems to me this response is as much in need of warrant as the contrary response of the Philosophy for Children program that such questions do belong in the regular educational program. Moreover it is difficult to know how else we might justify a particular curricular content than by appealing to the powers of children to learn such things, on the one hand, and to a set of value considerations on the other. Since philosophy is a valuable thing, then, and since young children can discourse philosophically, it surely has a prima facie claim to being included in any rich elementary or secondary school curriculum. McPeck also makes a curious analogy between thinking skills and penmanship, pointing to an Oregon study supporting the claim that training in good handwriting improved students' overall grade averages. I guess this could be interpreted as suggesting that penmanship should be reintroduced into the schools in a formal way, a goal we might all applaud. (It is certainly not novel to claim an intimate relationship between the development of hand and mind.) Surely if Philosophy for Children improves children's scholastic performance it should be considered for implementation in the schools, along with penmanship and lots of other things too.

I can be briefer about Sternberg and Adler, since Sternberg's objections are clearly directed against thinking skills programs other than the Philosophy for Children program, and because the main thrust of Adler's critique resembles so much points made by McPeck. Problem-solving is the focus of many thinking skills programs, and is appropriately an ingredient of all of them. But there are problems and there are problems. Every fifth-grader fears the notorious word problems which somehow demonstrate the applicability of abstract mathematical principles. But the same fifth-grader finds herself oddly attracted to the many paradoxes and puzzles that mathematics generates, even when these paradoxes are expressed in natural language. Perhaps the most disturbing feature of problem-solving approaches to thinking skills lies in their remoteness not from other curricular areas (a difficulty in itself) but in their irrelevance to the real-life problems the child faces at home and in society. Additionally, many features of the problem solving experience go unexamined in many critical thinking programs. Problems are presented to the child for her solution rather than emerge from her genuine personal concerns. Sternberg is concerned with this complex of issues in his two articles. He argues that critical thinking skills are not ordered to real-life problems, nor do they faithfully replicate the way in which problematic situations emerge in our experience. Unless we include in our problem-solving courses issues of problem-recognition and definition, the reformulation of ill-structured problems, and the likelihood that the vast majority of truly serious problems will admit of manifold solutions, our thinking skills programs will be useless, abstract exercises, having no carry-over to the important skills (let's call them the art) of living. Philosophy for Children (a program that Sternberg applauds) takes this issue very seriously. The problem Harry Stottlemeier faces in the first chapter of the book carrying his name is one that emerges out of his lived experience as a sixth-grader. It is a problem of embarrassment and confusion which is resolved by a deft combination of logical discovery and the assistance of a good friend. By encouraging free response to Harry's problem in the classroom, the philosophy teacher stimulates the discovery and formulation of the children's own problems, and their cooperative resolution in a dialoguing community. Where philosophy is taught in the elementary school, parents report, much to my satisfaction, that for the first time their children are bringing school home to them. Teachers report that philosophical issues are discussed at lunch, in rides back from basketball games. These anecdotes suggest that Philosophy for Children is no merely academic exercise, but touches youngsters' lives closely and intimately. Thinking skills should be embedded in the curriculum. They should also be related to real-life problems. Philosophy for Children entertains both these goals.

Mortimer Adler, in his little piece "Why 'Critical Thinking' Programs Won't Work", expresses economically much of the uneasiness felt by all of us when considering this new direction in basic education. His first point, that thinking is always thinking about something is the same point made by John McPeck, and we need not consider it further. But he makes one or two other interesting remarks worth considering here. For one thing he notices how poorly attention is paid to formal logic in most thinking skills programs. This has also startled me, as it must anyone with much philosophical training. But, Adler insists, even if it were more deeply developed, it is not clear that formal logical training has much carryover effect in the rest of the curriculum. Here, of course, critical thinking programs are usually more than courses in elementary logic, but, if the logical material seems to have no applicability, isn't is precisely because it is not embedded in curricular content to begin with? Here too I think we have said enough about this issue. Adler's practical suggestion is that thinking skills ought to be the object of specialized coaching within determinate subject areas, bringing to mind the orientation of his Paideia program. But coaching is not enough to encourage the child to see the basic connections between what she does in her other courses and the thinking skills emphasized in a thinking skills program. Here Sternberg's remarks are a useful corrective. Problems are messy, ragged, ill-structured things. Raising, formulating and resolving them depends as much on extensive, open discussion as it does on coaching (although we would all agree, I think, that a lecture course in thinking skills will accomplish little). In other words, the third prong of the Paideia program, the discussion/dialogue, is as important in a thinking skills program as the coaching prong. But this raises the likelihood that the form and rhetoric of philosophical discourse will dominate our thinking skills programs, if not the philosophical content. Many people ask me how Philosophy for Children relates to the Paideia program. I think it supplies an important complement to it. Adler, conformably with his Aristotelianism, thinks small children should be coached and trained. He does not think they can be participants in philosophical dialogue. They lack the years and the experience. But this is a piece of dogma, surely, one incidentally quite at variance with the philosophical inspiration of some of his putative philosophical heroes, such as Comenius and Dewey. The Paideia program is a fine instrument for the development of critical thinking skills, but it needs a corrective, one provided by programs like Philosophy for Children. Philosophy for Children recognizes that children are people too, that they are open, curious and wondering, that they seek fulfillment and happiness. The satisfaction of these needs must not be delayed by some arbitrary developmental and pedagogical theory that they are not "grown-up" enough for such experiences. They should not be relegated to the "waiting-list"[11] as Dewey put it. They should be encouraged, rather, to the articulation and rational defense of the full range of their opinions from day one. Philosophy for Children is a thinking skills program, but it is also one designed to make small children thoughtful. And this is perhaps a higher aim, because, if we want our adult population to be thoughtful and reflective, we cannot prevent our children from being thoughtful and reflective. A program of instruction that, for whatever reasons, lays stress on rote memory and the "mastery" of material, will produce a population qualified to recall information and obey orders. I suggest more is called for in the education of a democratic society.

I want to conclude with a somewhat different kind of observation, one especially directed to philosophers of education and teacher trainers. Whatever our preference for this or that thinking program, it strikes me that effective preparation for its teachers necessarily involves introduction to philosophical inquiry. This is so because philosophy includes the general theory of critical thinking. Philosophy examines the concept of thinking, the criteria enabling us to distinguish good from bad thinking, the usefulness and application of thinking skills in ordinary lived experience. Logical, psychological and axiological questions are all implied in the term "critical thinking". If these questions are not attended to, we will turn out teachers insufficiently grounded and thereby unqualified to administer any thinking skills program. A number of programs provide trainers and consultants promising to retool teachers in a weekend workshop. This is surely snake oil. If such training programs were presented in mathematics or English, we would all be shocked. But thinking is as "basic" a skill as any of these, perhaps more so. Thus the training of teachers of thinking skills must include extensive philosophical preparation. In the Philosophy for Children program the need for extensive teacher training is clearly recognized. In fact it is a feature, depressingly, that frequently turns teachers and administrators away. But, if the critical thinking movement evaporates into the thick history book of educational fads, my suspicion is that the chief reason will not be that the needs were unreal, but that the means of dealing with them were insufficiently realized. And these include extensive teacher training, and grounding in the basic philosophical disciplines.

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1. John McPeck, Critical Thinking and Education (New York: St. Martin's Press, 1981)
2. Robert J. Sternberg, "Teaching Critical Thinking," Phi Delta Kappan 67(November 1985):194-98, and 67(December 1985):277-80.
3. Mortimer J. Adler, "Why 'Critical Thinking' Programs Won't Work," Education Week (September 17, 1986):28.
4. Robert J. Mulvaney, "Philosophy for Children - Some Theoretical Considerations," SAPES Proceedings 1984:92-97.
5. John E. McPeck, "Critical Thinking and the 'Trivial Pursuit' Theory of Knowledge," Teaching Philosophy 8(October 1985):295-308.
6. Ibid., 295-96.
7. Ibid., 296.
8. Paul Chance, Thinking in the Classroom: A Survey of Programs (New York: Teachers College Press, 1986); Raymond S. Nickerson et al., The Teaching of Thinking (Hillsdale, NJ: L. Erlbaum Associates, 1985)

9. Jerome Bruner, The Process of Education (Cambridge, MA: Harvard University Press, 1960), 33.
10. McPeck, Critical Thinking and Education, 159-60.
11. John Dewey, Democracy and Education (New York: The Macmillan Co., 1916), 54.

PHILOSOPHY FOR CHILDREN AND THE CRITICAL THINKING MOVEMENT: REPLY TO MULVANEY

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To begin, let me express my sincere respect for the various contributions made during previous years by Professor Robert J. Mulvaney, who is a past president of this society. While wearing the hat of respondent this afternoon, my chief aim is to recognize Mulvaney's paper as a stimulating and informative extension of the 1984 SAPES addresses with Dr. James M. Ward (also from the University of South Carolina). These previous presentations described the experimental "Philosophy for Children Program" (PFC) originally devised by Matthew Lipman et al. at Montclair State College, New Jersey, and the ongoing progress of the various activites in the participating South Carolina schools. It would appear that I must play dual roles today, both child advocate as well as devil's advocate, in analyzing these claims.

The response delivered by Dr. Harold Franz (1984) was also effective as a part of the conference meeting since he raised some key questions, including the alternative approach of integrating philosophy into the curricula within other disciplines as opposed to favoring a single course. The rationale utilized the principle of continuity. More importantly in terms of Mulvaney's chosen topic this year, Franz referred to Professor John McPeck's (our keynote speaker from the University of Western Ontario) argument that teaching "Critical Thinking" (CT) as a process has to be contextualized. One might ask if this perceptive comment earlier served to stimulate Mulvaney to write a follow-up synthesis of the relevant literature for an interesting contrast within the PFC framework. CT, as a necessary aspect of educating, according to these popular views, must be developed in an integrated fashion. The current investigation by Mulvaney attempts to deal directly with such concerns. He argues that the basic rationale for PFC includes the focus on philosophy as a highly effective vehicle for teaching CT because of its nature as a discipline. In this way, the program features are thought to avoid the limitations of other well known approaches which assume that CT "skills" can be isolated and taught. Also, the dialogue sessions and written exercises with unique novels are designed to be meaningful and appropriate means of achieving both affective and cognitive goals across all grade levels of schooling in a spirit of open inquiry.

As an outsider who has not personally experienced such a program, I would like to observe that Mulvaney's views seem to be based upon the assumption of inherent merit of this experimental program which interprets the discipline of philosophy for children in our schools. It is apparent, however, that not all professionals in the related fields share this same degree of enthusiasm or belief that young pupils are "ready to do philosophy." On the other hand, he suggests that the burden of proof lies on those who argue such logical skills or questions of "ultimate concern" should be excluded rather than on those desiring philosophy in the curriculum, as a real possibility for warranted inquiry. At the very least, this programmatic idea deserves careful attention and study. We are indebted to Professor Mulvaney for his analytic review of the recent CT literature as linked to the existing critiques and the subject area of philosophy. I want to follow the same sequence in responding to his comments on various theorists' writings which outline the defense for PFC.

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Since philosophy is certainly concerned with the process of thinking, it is interesting to note that we are now trying to think critically about the various works of John McPeck, Robert Sternberg, and Mortimer Adler, who as individual experts have also been critically thinking or reasoning about the critical thinking movement itself! In this sense, a follow-up response paper then adds a fourth dimension or perhaps a kind of "critical zone" which hopefully will be a place of light and awakening to the issues at hand. Our 1986 SAPES conference theme here at Loyola University, "Thinking About Thinking," seems to have led us to this case.

Looking at the problem under consideration from an historical perspective, I would like to mention that John Dewey's important book, entitled How We Think, first appeared in the year 1910, based upon the practical work conducted within the Laboratory School in Chicago between 1896 and 1903 and reported later.[1] As all of you are aware, Dewey's method, called "reflective thinking" or intelligent action,was to be applied to all life situations recognizing that no separation exists between such action and appreciation in human experience. This experimental theory resolves the schooling conflict of the dichotomy of "process" and "product" as an integrated approach which attempts to channel the child's natural impulse toward logical order. This reflective process based upon individual interests and social needs in a specific situation represents a combining of the scientific mode of inquiry with a naturalistic view as a way of dealing with ethical matters. If concepts are taught in an isolated manner or rules are inculcated in a formal way, the results would be boredom and inattention warned Dewey. Rather, genuine problems arising from the student's social needs and individual interests should be the proper focus for vital and creative learning to take place.

As Dewey also pointed out in The Quest for Certainty, the idea of using the experimental approach in matters of personal and social conduct seems to suggest a lack of standards and authority.[2] In the realm of values and moral reasoning, some might argue that this potentially could be a crucial weakness of PFC, and could represent a very definite obstacle to optimal results with elementary age children. Sufficient experience would seem to be lacking for such investigations, and the entire process of open-ended inquiry through novels and talks could prove to be unsettling, especially if such adult topics as nuclear warfare, humane or appropriate punishment of criminals, sexual behavior, or drug abuse are included. Yes indeed, children may raise such issues but can they handle them philosophically? At any rate, "critical thinking" should emphasize reflection upon past experience as well as taking into account future consequences as suggested by John Dewey if the pitfalls of logical positivism are to be avoided. This view also represents a process of verification which is broader than simply utilizing the formal rules of logic and is more rigorous than the approach involving "informal logic" with "real-life problems" and borrowed techniques. Does PFC meet these criteria in practice?

Concerning the methodology of Mulvaney's paper, the basic approach employed within his total analysis is sound. By strictly staying inside the theoretical parameters defined by PFC, each of the authorities cited are shown to be relevant. The argument is strengthened by recognizing the validity of prevailing critiques. PFC, however, is found to be safe basically from these negative claims because it involves philosophy. This discipline could be viewed as an exemplar due to the very nature of its subject matter, as well as being a subject area, not a skills class or discrete course with vague objectives. But in my opinion the relative resolution of this issue appears to hinge on the viability or acceptance related to offering courses in philosophy at an early age. Further, what about validity questions due to the speculative, normative, and analytical functions of the field? Certainly, the stakes involved in these issues are high because of the focus on our youth. "Children are the world's most valuable resource", as John F. Kennedy said.

This dialogue serves to provoke an exchange of thoughts among us since Professor Mulvaney draws upon such valuable concepts as Dewey's "spiral" view of curricular activities and addresses the timely emphasis on promoting thinking skills within our schools. More importantly, we are challenged by Mulvaney's rather insistent claim for philosophy as one of the best fields (the role of such studies as the exposure to a foreign language or readings in literature is recognized also) to accomplish the desired CT results in a direct way.

From an "Eastern" perspective, after having recently returned from a sixth trip to India, a brief comment might provide a different kind of insight. One of the great spiritual leaders of our time, Avatar Meher Baba, has indicated that the nature of philosophical thinking can even be interpreted as a kind of "general meditation" which focuses on the problems of the nature of life and the universe. Although philosophical meditation often leads to conflicting systems or views, it can provide not only knowledge, but can also give the individual a sense of intellectual discipline as a foundation for later spiritual development.[3]

The basic thrust of Mulvaney's argument is that the major criticisms cited by authorities against CT programs "fail to score" when applied to PFC. The specific objections made by McPeck, Sternberg, and Adler are carefully summarized. Various counter-examples are effectively introduced taken from the premises and format of PFC. We should note here that Mulvaney tends to agree with many of the reservations raised concisely by McPeck, such as the inconsistent quality and availability of instructional materials and the emphasis on sets of isolated skills. Does he seem to beg the question, however, by claiming that "thinking about thinking," as a philosophic stock activity, offers a solution to the problem created by the fact that of course we must think about something? Yes, philosophy as a field of study or discipline can be clearly defined. But Mulvaney also states that every aspect of the curriculum has a foundation in philosophy. For example, I teach classes in the philosophy of sport, including ethical issues, personal meaning in sport, self-knowledge through human performance, and aesthetic concerns. This philosophic dimension certainly has curricular implications for all subject areas.

The second point related to the existence of "generic thinking skills" and the transfer of skills issue is examined in a fairly balanced manner with a call for further study. I have no quarrel with this portion of the paper. The third point in support of the traditional liberal arts avenue as a more valid means of developing CT and the habit of "reflective skepticism" is endorsed by Mulvaney. However, he builds a case for offering these studies, particularly the discipline of philosophy, much earlier during the process of schooling. On the basis of the previous presentations with Ward in 1984 and today's description, it still is not clear to what extent PFC programs focus on elementary, middle school, or older student target groups in terms of actual field sites and public acceptance. Yes, a link (if documented) which could show a relationship between PFC and total school achievement or grade performance might help the cause for expansion but again the area of teaching values is definitely a difficult issue. As a practical example, you will enjoy reading a current magazine report on whose values should be taught in the classroom in response to political calls for ethics in the schools. The article is entitled, "Morals Mine Field."[4] Also, my 1975 SAPES paper was on "CT."

McPeck's writings, including arguments against the "trivial pursuit" theory of knowledge and "quick-fix" solutions to the CT problem, are dramatic and useful. He rightly observes that the disciplines within the liberal arts also are concerned with what have been called in the literature, "everyday problems," but it is clear that they simply examine these problems one aspect at a time. CT criteria are not external but determined by the disciplines themselves.[5]

Although a "remedial role" might serve as a valid rationale for CT or skills oriented programs, McPeck considers this approach as a kind of "rear-guard action" with little innovative appeal. He argues that introducing such classes would be an unwelcome addition to an already over-crowed curriculum. Even though McPeck's analysis is not extensive, the comments on the relative merits of PFC and value judgments involved seem to be significant. As previously discussed, Mulvaney deals with this problem by questioning which side must bear the burden of proof.

Concerning Sternberg's position, PFC as an educational venture would appear to be in good shape since children resolve problems through cooperative dialogue, and parents are reportedly impressed with the excitement generated by these interactions.[6] One can only wonder, on the other hand, if all the outcomes of certain discussions involving sensitive issues are positive in terms of their feelings.

The analysis of Adler's concise reasons "why CT programs won't work" is clear and instructive. Yes, "coaching" is necessary but it would not seem to be enough. The different dialogue activities are designed to connect these new thinking skills to other curricula.[7] As Mulvaney has observed, whether or not Dewey would support teaching philosophy as a distinct subject is debatable using existing writings. I do think that the point is well taken that children can be helped to think in a reflective fashion as a necessary condition within a democratic society.

Mulvaney's final remarks really do strike the mark concerning the issue of effective teacher training given the limited purposes and scope evident in brief workshops for CT programs. As a case example, I enjoyed reading Pritchard's piece on PFC in a public library since the actual dialogues reported illustrate how the CT materials must be carefully used in the context of philosophic inquiry, rather than a means of simply mastering a set of skills. Concepts such as fairness and the nature of thoughts and feelings were taught without introducing jargon.[8] My own personal position here is that teachers interested in promoting CT must also create a positive climate of trust and caring for their students to achieve aims.

In conclusion, while the relative merits of the "Philosophy for Children" (PFC) program and current impact can be debated, Professor Mulvaney has delivered a solid defense of this innovative program by answering the outstanding critics of the CT movement. Am I still skeptical at this point? Let me just say that at present we all have a much better understanding of the issues to be faced in teaching the field of philosophy to children. Now, we look forward to continuing this dialogue when we attend the keynote session with our guest speaker, Dr. John McPeck, from Canada!

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1. John Dewey, How We Think (Gateway Edition, Chicago: Henry Regnery,1933,1971).
2. John Dewey, The Quest for Certainty (New York: Minton and Balch, 1929),p.273.
3. C. B. Purdom, God to Man and Man to God: The Discourses of Meher Baba (London: Victor Gollancz Ltd., 1955), pp. 104-105.
4. Eloise Salholz, Renee Michael, and Pat Wingert, "Morals Mine Field," Newsweek (October 13, 1986), p. 92.
5. John McPeck, "Critical Thinking and the 'Trivial Pursuit' Theory of Knowledge," Teaching Philosophy Volume 8 (October 1985), pp.295-308.
6. Robert J. Sternberg, "Teaching Critical Thinking, Part 1: Are We Making Critical Mistakes?" and "Part 2: Possible Solutions," Phi Delta Kappan (November and December 1985), pp. 194-198 and pp. 277-280.
7. See Mulvaney's paper for a complete analysis of Mortimer J. Adler's commentary in Education Week entitled, "Why 'Critical Thinking' Programs Won't Work."
8. M. S. Pritchard, "PFC in a Public Library," Teaching Philosophy 6 (July 1983).

THEORETIC EDUCATION

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Thesis

The argument here is that given the generally understood nature of theory in science and in the academic disciplines, and the practical consequentiality thereof, theory in the discipline of education, constituting bodies of thought incorporating empirical observation, reason and reflective imagination shaped toward explanatory ends, is also of functional consequence; that education centering directly upon and among theoretic content, process and form constitutes in and of itself a type of learning experience arguably more fruitful and generative than the acquisition of observed facts, descriptive concepts and principles which are the stuff of conventional instruction; that the promise of this theoretic education bears productively upon institutional service and leadership; and that it is especially critical in transforming the focus of contemporary reform initiatives from their pragmatic intent and character, problematical as to kind, and demonstrably ineffectual as to power, to the theoretic context of philosophic analysis and scientific imagination within which milieu the social construction of reality takes place, and upon which plane of discourse the essential reconstruction of existing educational phenomena can but begin.

Following this summary (a), the paper is comprised of sections (b) a discussion of the nature and role of theory at large among the arts, the sciences and the professions; (c) a depiction of the concept of theoretic education, mainly in the form of propositional expressions; (d) certain ad hoc, heuristic applications of this concept, illustrating the transformation of "practical" problems and issues as ordinarily perceived into the abstract (conceptual) language of "theory"; and finally, (e) a projection toward broader potential changes, immediate and long range, envisioned should the proposed concept take root among the conventions and established institutions through which American education is practiced.

Theory, Science and Practical Affairs

Whereas theory as an idealized end is the virtual ikon of inquiry in the empirical sciences, has become increasingly valued as the social sciences have gained strength, and holds a special niche in the literature of the arts (aesthetics, literary criticism, theory of art), efforts to conceptualuze in general terms what it *is*, prove meanings to be elusive, complex and anything but consistent among interpretations and across disciplines.

A dictionary of ordinary language[1] offers useful elementary meanings in the context of a contrast between *theory* and *practice*, thus:

> *Theory (n)* (2) The analysis of a set of facts in their ideal relations to one another; as essays in *theory*. 3. The general or abstract principles of any body of facts; pure, as distinguished from applied, science or art;

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> as, the *theory* of music or of medicine. Cf. PRACTICE, 1. 4. A more or less plausible or scientifically acceptable general principle offered to explain phenomena. 5. Loosely, a hypothesis; a guess. 6. *Math.* A body of theorems presenting a clear, rounded and systematic view of a subject; as the *theory* of equations. Syn. See HYPOTHESIS.

And a dictionary of philosophy at hand[2] presents the following:

> *Theory*. (Gk., theoria, "a beholding," "a looking at," "viewing"). 1. An apprehension of things in their universal and ideal relationships to one another. Opposite to practice and/or to factual existence. 2. An abstract or general principle within a body of knowledge that presents a clear and systematic view of some of its subject matter, as in a "theory" of art or the atomic "theory." 3. A general, abstract, idealized principle or model used to explain phenomena, as in the "theory" of natural selection. 4. A hypothesis, supposition, or construct assumed to be true and on the basis of which phenomena can be predicted and/or explained and from which further empirical knowledge can be deduced.

To move beyond basic meaning, toward the functionality of matter which can be reasonably identified as theoretic, and for the moment to take the liberty of equating the process of philosophizing with the process of theorizing, George Newsome[3] interprets the quest for abstractions which represent and subsume the concrete particularities of immediate experience in terms of contemporary "game theory," observing that:

> ...Philosophy as a discipline is a literature, a subject matter; but philosophy as an activity is like a game played according to rules. ...
>
> When the game is played with the subject matter of philosophy as a discipline, or with the subject matter of other disciplines, playing the game results in a revision of language and concepts of a discipline.

But this is an essay on *theory in eucation*, and accordingly a substantial body of scholarly thought -- Marc Belth, Jeremy Bernstein, Gerald Holton, Michael Polanyi -- bearing upon the nature and role of theory and philosophic inquiry in science and practical affairs at large must perforce be bypassed. The present thesis, as represented in the propositional expressions that follow, is in fact but one of a sequence of developments in the author's own educational thought, with main concentration over the years in the restricted but generative field to which he has applied the term Differential Education for the Gifted (DEG).[4] Apart from his own efforts toward the construction of theory in this specialized problem area, the radical aversion which exists between theory and practice in thought pertaining to school affairs, has seemed to make necessary appeals (via lecture, conference papers, research proposals) less for substantive advancements in theory such as exists, and more in exhortation that theory *is* something other than ethereal and removed discourse; that it *does* something, rather than being ineffectual or inconsequential; that it is, analogously, to school practice *like a road map to travel*; and that it is in fact *the very intelligence of educational practice.*

Two prior lines of argument, one toward the positive impact of philosophic analysis upon this theoretically deficient arena of professional thought and action, and the other a statement markedly of negative import, appraising what the aversion to and neglect of theoretic foundations has allowed by way of erosion of the logic and the language which characterized the historic beginnings of the movement, now at a peak of national and international interest, in the psychological sciences and educational thought of the American nation.

In the instance of deficit theory, a condition, that is, where beyond the felt needs out of which the initiative first emerged in the earlier decades of the present century, theory sufficient to sustain consistent and fruitful practice has never evolved, such that the emergence of unwarranted practices and provisions loosely heralding as the real thing might have and in fact has occurred, the writer has proposed research[5] -- in the manner of Newsome's "playing the game of philosophy." In this work, existing practice, subsumed under five main modalities (policy, educand, curriculum, educator, program) would be disciplined through reference to four main philosophical modalities (metaphysical, axiological, logical, epistemological). The anticipated end would be a body of thought, comprehensive in scope, rigorously re-developed in this appropriate manner, such that it would constitute a scientifically (and philosophically) respectable theoretic foundation for DEG, rudimentary of course at the hands of a single research constructivist, but fit in form and plane of discourse for collective advance thereafter.

In the second instance, there is exemplified, in a still more stark fashion how an arena of thought and action (DEG) can so radically depart from its original scientific justification, and common sense warrant, that corrective efforts like those just indicated would be working, not from a position of general deficiency, but against substantially developed and pervasive powers "below ground zero" as it were. This dysgenic condition, ranges from relatively naive and uninformed positions atheoretic in nature, through those arguably supported by quasi-theory, as in the current proliferation of "systems and models of creative, gifted and talented education," and still further to those where it seems that unacceptable and irresponsible uses of reason and imagination can but be termed anti-theoretic in nature. Such it is feared is the regrettable state of affairs in DEG that has emerged during the 1970s, and which, despite a few welcome signs of incipient revolt, appears to prevail across the nation today. Centering in the loose and ambiguous notion of enrichment, curricular and program, which concept was discredited in professional circles as early as the 1940s and 1950s, it has re-surfaced today in militantly aggressive forms which have virtually stifled reference and recourse to the educational wisdom which passes muster among the wider and wider ranges of shared experience which John Dewey has instructed us to be necessary in the attainment and advancement of sound understanding.

Indeed it is in the light of these indications as to the consequentiality of theory, positive and negative, in the practice of education, that one of John Dewey's trenchant observations appears signally appropriate as a conclusion to this segment of the argument for theoretic education. He states:

> There is a kind of idle theory which is antithetical to practice; but genuinely scientific theory falls within practice ... as the agency of its expansion and its direction to new possibilities. Science, by its very nature, represents the office of intelligence.[6]

The Concept of Theoretic Education

Considerations as to the meanings and functions of theory in science at large, and of its consequentiality in authenticating the educational thought from which educational practice ensues, or in the better case should ensue, may now give way to the central emphasis of the paper, namely that direct instruction and learning centering in the processes and products of theory serves as a mitigating force against the spontaneous evasion of theoretical constructions which, as I have argued, prevail within the restricted arena of extraordinary education for positively extraordinary youth (DEG). An important question occurs, however: Do the stark deficiencies in theory-less thought and activity in the delimited area extend into the thought and practice of American education at large?

Though for many readers an affirmative answer to this question scarcely needs belaboring, it appears useful briefly at least to suggest in what ways it does seem to be true. As viewed from the perspective of the same subdivisions within philosophical inquiry which were employed above, and extending the analysis beyond the mere naming of the divisions and toward applications of each, it is submitted that flaws of these kinds can readily and frequently be observed in discourse involving problems and issues commonly experienced in school and community life, thus:

1. Metaphysical bases are typically inexplicit, and often confused and contradictory, as may be observed in contemporary discussions pertaining to issues like secular humanism, the right to life, and creationism as opposed to biological evolution as an explanation of the origin of the human species;

2. Axiological confusions abound, as may be witnessed in the arguments over the central purposes of schools in a democratic nation, and the endless re-emergence of issues like the corporal punishment of children, and (more recently) tobacco smoking as a health issue, and drug abuse as a social issue;

3. Logical flaws are prevalent, as may be noted in the frequent admixtures of expediency and feasibility with educational rationale per se in arguments for or against interscholastic athletics in school and college programs; and in the massive conflicts of the past two decades over the achievement of racial balances among school populations; and

4. Epistemological naivete and ignorance flourish, as in the perennially unresolved issues as to the form and nature of the school curriculum at various developmental ages.

Thus it is argued, and one believes with reason, that consciously inducing a greater disposition toward reflective analysis as distinct from impromptu and impressionistic discourse, and providing systematic experience, even if but elementary, in philosophic analysis and other types of theoretic discourse, would ameliorate by indeterminate but significant degrees the erroneous tendencies and deleterious resultants noted.

It was some four years ago (Spring term, 1981-82), pursuant upon transfer from the department of Foundations of Education to that of Educational Research and Evaluation, that this writer's concerns and deepening frustration with the unchanging state of affairs inside his immediate academic environ and at large in the literature of the day, prompted the formulation of a graduate course intended to serve the ends here proposed. Certain de facto excerpts from the course prospectus (initially entitled "Theoretic Foundations of Education")[7] should help to flesh out the intent and nature of this initiative, thus:

Rationale and Purpose. Theoretic work in the life and social sciences, and in educational thought and practice which draw support from them, may be considered both as formal in nature, i.e., language and logic relating to the general attributes of symbolic formulations within specified areas of understanding and inquiry (biology, sociology; administration, counseling, curriculum); and as substantive, i.e., observations and inquiries relating to the internal structures and functions of given disciplines or problems, and the external relations thereof. In the tracing of theory, explorations occur into the conceptual undergirdings of psychology (perception, cognition, affect, conation) and of philosophy (logic, epistemology).

The purpose of the course, involving responsible initiative and interaction on the parts both of the instructor and of reflective students in advanced stages of their respective studies, is to provide occasion for exercise among these forms of thought and expression.

Objectives. To identify theoretic matter (comparative analyses, original constructions in idea or action, models, propositional sets, schools of thought) in given areas of social and intellectual experience, and to examine these phenomena in the light of general meanings and criterial referents for theory as such; and (2) to provide functional experience in the conceptual analysis (language, logic; knowledge; value) of educational phenomena as represented in contemporary literature and institutional practice.

It may scarcely need saying for most of those of us who labor in the vineyards of a school of education, my own by observable counts having as yet to reach its majority in the caliber of student and program which would be prideful, course offerings of this kind, entailing exercises, some set up as a challenge to the instructor himself and others requiring investigation, probing thought and exploratory writing for students in keeping with the course conception, were perceived in advance as stressful simply by virtue of their unaccustomed nature.

Taking then theoretic analysis and constructed realities to constitute a sort of intellectual purification of the raw substance of typical educational mentality flourishing among the journals and books of the contemporary era, certain practical assertions in support of the central thesis at hand will formalize and focalize the matter such that reflective examination may be more explicit. Three such formal observations are submitted in the convenient form of propositions.

Respecting the existence and meaning of the concept "theory":

Proposition 1: The Reality of Theory. That theory, or theoretic matter, in and of given epistemological realms, inclusive of that representing the arts and sciences of education, is realizable (definable, substantial), consequential and subject to direct examination as to its nature, role and function in practical affairs; and that for the purposes of education, it may be usefully construed to mean and embrace the processes and the products of reasoning, understanding, imagination and judgment in the acts of analysis, explanation, evaluation, construction, and the like, within and among the various bodies of knowledge in their current state of development.

Respecting the value of theoretic knowledge in professional training:

> Proposition 2: The Study of Theory (i.e., Theoretic Education) in the Professions. That the study of theory in the practicing professions (agriculture, business, education, medicine) conduces toward the development of the aptitude potentials for the work at hand by deepening the individuals insights toward the theoretic knowledge of his field requisite to personal autonomy in professional service and leadership.

And respecting the import of intellectual development, i.e., the capability for constructive management of abstract knowledge, for a democratic citizenry:

> Proposition 3: The Generic Value of Developed Intelligence in Human Affairs. That in the course of developmental schooling for citizenry in societies that are free and framed within the democratic precept and practice, during and beyond the period of adolescence (secondary school, college, life span), and in whatever epistemological realm (aesthetics, life sciences, mathematics, philosophy, religion), the study of abstractions underlying and overlying the immediate apprehension of natural and social conditions respectively represented -- i.e., the theory of the given discipline -- is a proper end; and that this end is requisite to the fulfillment of the human intellectual potential and to contributory and productive service to self, to the immediate community and, however modest and removed ordinary actions may be, ultimately to the world community of humankind in its entirety.

In anticipation that the third of these propositions, more than the other two, might raise more serious immediate doubts, on the score of feasibility one would trust rather than desirability,one may hearken back by a quarter of a century to a kindred understanding, for what it is worth. In the Foreword of a 1961 statement, The Central Purpose of American Education[8] the Educational Policies Commission of the National Education Association of the United States submits the following statement, relating of course to the education of all children, and yet in an unequivocal way holding by way of general education much of what is in this essay ambitiously held to be of "central" importance.

> A crucial issue in this document is the meaning and use of the word central. Does a central purpose mean an exclusive purpose? Does its use imply a rigid hierarchy of purposes, with the development of the rational powers of man always at the pinnacle?
>
> We do not so interpret central purpose. We use the term not to mark other educational purposes as subordinate but rather to convey the idea that it is the thinking person who can bring all valid purposes into an integrated whole. Rationality is a means as well as an end.
>
> Education must be interfused with the process of thinking and the attitude of thoughtfulness. ...
>
> We most ephatically reject the idea that a few should be educated and that the majority should be trained. We say, on the contrary, that all have latent, unrealized powers of creativity. Our emphasis on thinking as a central outcome of education stresses the pervasiveness of rationality in all the purposes of education.

Both the ensuing sections of this paper should serve to clarify detail among these closely phrased assertions. It is necessary, however, at this point to take note of at least two usages lest the propositions appear more than otherwise inconsistent or untenable. First, the reference to the developmental period of adolescence invokes the inference that general education prior to (i.e., childhood) and subsequent to this developmental delineation (i.e., adulthood, life span) is categorically or essentially different; and second, the implicit but dogged severance of general education from other legitimate categories of learning, here especially those which may be thought of as specialized, technical, vocational or even "professional" in a widely employed sense, invokes the notion that there exist effective differences between the two experiential media. In the author's still developing theory of "Lifetime Education: Theory and System,"[9] these distinctions are fundamental. And here it is respectfully submitted that failures forcefully and pervasively to distinguish among these several semantic uses and the operations which follow thereupon, contribute, and one believes substantially so, to the ideational confusions which render schools and educators so very subject to criticism and to perennial calls for reform even on the part of those who have not a great deal to offer by way of reliable knowledge or thought as to what comprises either error or the rectification thereof.

Heuristic Applications

Thus far I have brought into play certain considerations as to the role of theory in science and in practical affairs where knowledge of various kinds is required; offered certain observations relating to the positive values of educational theory where it is linked to ongoing educational thought and action, and the negative import where the two, theory and practice, are split and disconnected; and have detailed in gross outline at least the meanings submitted here under the notion of theoretic education through which it is proposed that the prevailing antipathy can be ameliorated and turned to positive account first through the modification of teacher education programs and then eventually through the constructive transformation of the school and college curriculum and program requirements for individuals at large in the pursuit of general education.

In these developments, both the processes of theorizing and the products have been indicated as inherent in the pursuit of learnings on a transformed plane of representation of the phenomena of education. But what, then, do these transformations look like, such that those who might wish to employ the idea within their own academic setting can have suggestions at least from which to develop their own way of implementing the values indicated? I shall provide first, in tabular form, the ad hoc illustrations which evolved in the course of development of this presentation, limited examples of how I see practical conditions, problems and issues being thus positively moved to the level of subsumptive resource constructions and disciplines; and then I shall make brief reference to certain published resources, considerably more exemplary, of theoretic work accomplished at the hands of recognized scholars and thinkers .

The Transformation of Practical Conditions, Issues and Problems into Theoretic Abstractions

Problem Area	Practical Consideration and Action	Conceptual Consideration (for analysis & planning)
Policy	State agency regulations; school board policies; handbooks for teachers and students	Democratic ideology; psychological, sociological theory; economics, politics, law
Student	Ability for school work; problem kids and parents; progress reports; punishment and rewards	Nature and organization of mind; educability of groups; nature-nurture issues
Curriculum	School subjects as offered; graduation requirements; curricular tracks; college admissions	Epistemological realms; developmental stages; learning theories
Teacher	Certification requirements; degree programs; administrators; salary; burn-out	Experience and instruction; cognition, motivation; individual differences; personal growth; professional organizations
School Organization and Operation	Grade and school divisions in the locality; ungraded school; ethnic balance	Sociology of organizations; democratic governance; public relations; personnel management

Among existing works, which by intent of the author and character of the resulting product comprise exemplary illustrations of the types of sources and models heralded here as "theoretic" in nature, the following are submitted:

1. Jerome Bruner, Toward a Theory of Instruction (1966).[10] In this small book (following his earlier Process of Education) this brilliantly reflective student of human intelligence in the process of formative development offers penetrating observations on the "nature of intellectual growth and its relation to theories of learning and methods of teaching."

2. Abraham Kaplan, The Conduct of Inquiry (1964).[11] Kaplan brings his philosophic mind to a study of methodologies employed in the social and behavioral sciences, and thus deepens everyday perception through the eduction and construction of a more generic language for the behavioral sciences.

3. Jonas F. Soltis, "On the Nature of Educational Research" (1984).[12] Here the author searches for clarity among the "different languages and logics of educational research," and eventually finds their roots among certain 20th century philosophical traditions.

4. Douglas R. Hofstadter, Metamagical Themas: Questing for the Essence of Mind and Pattern (1985).[13] In this commanding meta-analysis of "literary, scientific and artistic studies," this notable thinker develops a deeply penetrating study of the structures and processes inherent in man's quest for understanding nature and himself.

5. R. Bruce Raup, et al., The Improvement of Practical Intelligence: The Central Task of Education (1943).[14] The "Raup Group" offers a work both "pioneering and definitive" which draws upon fields such as "decision theory, community development, socialization process, leadership, symbolism" to eventuate in a powerful synthesis relating education to the attack upon social problems in the practical interest of community betterment.

When the student (graduate, in-service, pre-professional, prospective teacher, librarian, principal) is put to the task, as in the tabular depiction above, of reconstructing the language of the schools as it tends to occur into relevant and subsumptive higher order conceptual elements and frameworks, he or she is learning to think in terms and at levels through which the development of policy and the solution of curricular problems are more authentic and more stable, and thus where autonomous judgments on all the particularities of everyday institutional routines are likely to be less problematical -- less wasteful, that is, erroneous, injurious to the system and to the persons associated therewith.

Where the individual, developed for the profession of teaching through the thought of observers who practice, and this ably, the reconstruction of experience as it occurs, as with the authors and works cited, changes in the character of his training regimen occur, and still more importantly, changes occur in the character (affective, cognitive predisposition; purposive habituation) of the person who qualifies for the course. Collectively these transformations promise to produce a core of professionals, and in effect a profession itself, recognizably different and better suited to the educational guidance of children than what appears to have been the case, en masse and under spontaneous conditions and dynamics, over the better part of the present century.

Potentiality: Broader Consequentiality

> ...science never has been or can be popular. Close reasoning is an arduous task for which few have the opportunity, the equipment and the inclination. Moreover, the will to illusion is a powerful and all-pervasive factor. Unless we realize the pleasant character of illusion, as similar to that of intoxicating liquors, fumes, or physical gyrations, we cannot understand the course of human history.
> Morris R. Cohen, A Preface to Logic.[15]

Now Cohen's injunction is not to be taken lightly, and it surely must temper overweening anticipations; yet at the same time, abjectly to yield to it is fatalistic, and the whole idea of progress is thereby reduced to chance. Though we are not here in position to argue the case under examination on grounds of past history and distant future, it bears reminding that not all idealists are completely out of the realm of reality. Robert Hutchins, for instance, who headed a great American university (Chicago) during certain of its peak years of achievement and influence has argued for and urged upon us "A Learning Society,"[16] in which work, according to a Boston Globe reviewer, he submits that: "In the Twenty-first Century, education may at last come into its own."

But it is not necessary thus to conclude this argument only on a ray of distant hope, however meritorious that ideal may be. Rather, my own sense of the erratic and uncertain nature of social change compounds with a conviction shared with historians, poets and philosophers alike, that education is indeed man's ultimate salvation, and leads to the closing perspective inherent in the propositions above, through which the concept of theoretic education was explicated, this being: (a) that, as in the second formal assertion, the immediate appeal to those of us who have assumed the mantle of higher education, where education for the teaching profession is undertaken, puts the challenge precisely where it belongs in the first instance; and (b) that, as in the third assertion, there will eventuate in the ensuing waves of change thus brought about by teachers of children who are to be the mothers and the fathers, the educators and the ministers, the scholars and the statesmen of tomorrow, further degrees of progress, indeterminate of course as to magnitude, similar to those which we now enjoy. One may, in support of the feasibility of this earthly and human faith, see about him the actualities of international travel and space exploration second only in instantaneity to electronic communication and report via the media of satellite relay and printout thereof; vast natural resources still not squandered, along with the wealth of favored nations subject to still more constructive re-employment; and the will of national leaders which in the final analysis can but be malleable and subject to some forms of human reason if alone for survival of the species.

A more immediate focus, however, of application to the practical affairs of state and nation, lies in the arena, now very live and very urgent, of reform of the American schools. There is of course a compelling urgency to this social need for institutional reconstruction, and in that informed critics are pointing out the perennial nature of such impulses, some force and dynamic different from the familiar "rearrangements of institutional furniture" previously found wanting, appears to be indicated. It is the infrastructure of the educational highway, not merely its potholes, which needs to be rebuilt. And this is likely to occur only when we resort, almost as though beyond ourselves, to deeper, more subsumptive and more forceful levels in the uses of human understanding, reason and imagination than those to which we are accustomed. The call sketchily formulated in the present essay is intended toward no less than this end, that the very perception of public instruction -- beyond current reform and into the future -- be transformed from the immediately utilitarian plane (pragmatic only in the narrow sense) to educational discourse and action comprised of the sturdier stuff of ideas which we have termed the theoretic. The practical affairs of education, thus imbued at the foundations wich scientific understanding and theoretic knowledge appears to fit, one is pleased to note, both with the Greek appreciation for the idea as eminently practical (praktikos), and with the concept which the modern social theorists cited above, Raup and his associates, refer to as practical intelligence, the central task of education.

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THEORETIC EDUCATION: A RESPONSE TO VIRGIL WARD

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Although I find myself to be basically in agreement with Professor Ward, in what follows I shall differ with him somewhat on a few points and expand in my own way upon others. As I understand his paper, it presents us with the general claim that theory is an indispensably valuable part of education, indeed so much so that the enterprise of education ought to be approached in terms of a concept of "theoretic education". I take it that he maintains this view both with respect to the importance of theory within the field of education (both as to the creation and criticism of theoretical framewords and as to their role in the education of future educators) and with respect to educating students in any field of study. In what follows I shall consider mainly the latter, more comprehensive, version of his view, i.e., that we ought to teach our students to "think about thinking", to reflect upon the theoretical constituents of their field of study, whatever that field might be.

This thesis in turn comprises or presupposes five further propositions[1] which perhaps can be stated as follows: (1) Theory is a "real or effectual form of human understanding", which is to say, a genuine way of knowing, or accurately and adequately apprehending reality. (2) Education centered upon theory, e.g., learning theories and the conceptual skills involved in analyzing, comparing, and criticizing theories, is something which the human mind is quite capable of and which contributes substantially to its growth. In other words, thinking on a theoretical level is within the intellectual reach of the typical learner,and is an important part of human cognitive development. (3) The development of theory for a professional discipline and its application to its practices undergirds and illuminates that practice and gives coherence and credibility to the discipline as a whole. (4) Technical education, e.e., "education" which lacks a theoretical focus or emphasis, is less than genuine education. (5) "Theoretic education", or education with a theoretical focus, is indispensible to professional education.

I think the first of these propositions is sufficiently warranted if correctly understood, i.e., in the manner indicated by the quotation from John Dewey given in Professor Wards' paper, viz.: "There is a kind of idle theory which is antithetical to practice; but genuinely scientific theory falls within practice . . ."[2] In our zeal to defend the epistemic importance of theory, the importance of its role in our knowledge of the world, we commonly portray it as a self-sufficient means of knowledge, and thus as a consequence, as dissociated from that which is necessary for its origination and validation, viz., experience and practice. The pragmatist William James described the logical plight of idealists such as F.H. Bradley in terms of the Aesop fable of the dog that lost its bone in the water by letting it drop from its mouth, while attempting to capture its very reflection.[3] In a similar manner we are likely to lose what makes theories epistemically valuable in an overzealous attempt to seek more of the same. Or in simple logical terms, it seems a case of confusing necessary and sufficient conditions. Theoretical considerations are indispensable to knowledge, to its discovery and understanding, and are

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thus of the highest importance to it, but they are not alone adequate. A number of other but related things are also necessary, such as its application to practice in diverse situations.

In order to forestall another common confusion I should point out that the view that I endorse here, that correct theory is not alone sufficient to knowledge, does not imply that the study of theory in its own right is not a valid and worthwhile part of education. To hold otherwise, is as if to argue that there is no point in studying carburetors in an auto mechanics course because a car will not run with only a carburetor. On the hand, this does not deny that at some juncture in the auto mechanics course the student must obtain a more holistic understanding of how carburetor, distributor, transmission, and the remaining parts function interactively, nor that education must also include a study of theory within its contexts of application.

Following Professor Ward's lead, perhaps it is helpful to refer to the dictionary regarding this point. It distinguishes four basic meanings that are in common usage: (1) a belief, policy, or procedure proposed or followed as the basis of action; (2) the body of generalizations and principles developed in association with practice in a field of activity and forming its content as an intellectual discipline; (3) a judgment, conception, proposition, or formula formed by speculation, deduction, or by abstraction and generalization from facts; and (4) an unproved assumption or conjecture. It is, I think, primarily the last two meanings that give theory and theory-centered education their bad press. An unproved assumption or conjecture is of course not knowledge. If guessing were knowing, we could all break the bank at a Las Vegas casino. Nor as I have said above, is what is derived by any method such as speculation or deduction which divorces theory from experience and practice knowledge. These two meanings also are related in that theory acquired and validated apart from practice is basically just unproved assumption, whereas theory properly validated is an essential component of knowledge. The second of the dictionary meanings is that in terms of which I think a view of theoretic education is most defensible, that according to which theory is developed in conjunction with practice within the context of a discipline, field, or profession, but also itself an important part of its content.

The second of the five propositions that I take to be essential to Professor Ward's concept of "theoretic education" is, as stated above, that thinking on a theoretical level is within the reach of the typical learner and is an important part of human cognitive development. I think this is the other side of the same coin I have already used to purchase a few points. Just as theory is an essential constituent of knowledge, such that we cannot be said to know on the basis of raw data or unorganized information apart from its ordering and explanation, there is no complete cognitive development without a theoretical component. Various cognitive skills, such as those of conceptual analysis and evaluation, are best developed, and probably only fully developed, in connection with intellectually mastering theories of some sort. And given that theories differ in their complexity, theoretical comprehension, on at least some level, is surely accessible to most learners. For example, although most high school students probably cannot understand Einstein's general theory of relativity, most probably can understand the kinetic theory of gases, and probably all can understand the basic theory of the internal combustion engine. Furthermore, theories not only differ in difficulty, but theories can be approached at different levels of difficulty.

For example, a student may comprehend how the rapid burning of fuel within the engine cylinders powers the vehicle, and yet not understand, for example, the theory involved in explaining how combustion occurs. Or to take an example from my own area of teaching, I anticipate that any of my philosophy of art students who make the attempt can grasp the basic difference between mimetic and expressionistic theories of painting, music, etc., i.e., the difference between saying that a work of art represents something in life or nature versus saying it expresses some psychological state such as an emotion, without their understanding the intricacies of various versions of these theories and debates that have raged about them from Plato to Dickie and Danto.

The third of Professor Ward's propositions, as I have paraphrased it, is that the development of theory for a professional discipline and its application to its practices undergirds and illuminates that practice and gives coherence and credibility to the discipline as a whole. This is the proposition of his with which I think I most fully agree. If as I have thus far claimed in this paper, theory is a necessary condition or component of knowledge, and further as I shall now assert, knowledge is a necessary condition to professional practice of whatever kind, it is to be concluded that a profession cannot be without its theoretical underpinnings. I think that the three most important criteria identifying a profession, be it medical, educational, or what have you, are the following: (1) the possession and application of special knowledge and skills, (2) a rather considerable degree of professional autonomy or self-regulation, and (3) the pursuit of some primary goal regarded by society at large as being a fundamental good.[4] I will not go so far as to claim that these three characterizations together constitutes a sufficient set. I think there is probably a fourth or a fifth necessary to characterizing at least some professions. Nor shall I even claim each is a necessary condition; for if, for example, the medical profession lost virtually all of its professional autonomy under some so-called system of socialized medicine, I think we would still be disinclined to say that it had thereby ceased to be a profession, and also if our culture somehow reversed its current trend and ceased to regard health care as being a fundamental good, again I think that we could continue to regard physicians and nurses as having a professional status. On the first criterion, however, I shall stand firm, that is, I shall insist that the possession and application of special knowledge and skills is a necessary condition for something being a profession. Thus if we were to discover somehow that physicians had no special knowledge regarding matters of health and disease, I think we would conclude that their possessing the title and status of a profession was undeserved. (And I would of course draw the same conclusion with respect to the teaching profession, i.e., if they could do what they do without knowledge and skills with respect to what and how to teach, the appellation of "profession" would be inappropriate.)

A consideration corroborating my claim that special knowledge and skills are a necessary condition for an occupation or practice to be a profession is that the recognition of new professions has occurred in a manner closely corresponding to the appearance and growth of appropriate fields of knowledge. Conversely, we regard the ascription of the term "profession" to occupations of unskilled labor as misplaced. Since the words "profession" and "professional" carry a positive connotation, attempts naturally will be made by occupational groups to have it incorporated into the expressions commonly used to designate them, but such usages have not been generally adopted, or if so only in the manner of a euphemism. Thus it is with such expressions as it is with, for example, "permanent floral arrangements", which either reverts to something like "plastic flowers" or is said somewhat tongue in the cheek. Accordingly, a term such as "the janitorial profession" has not become common usage, but "the accounting profession" has. And if my view is correct this is at least primarily because of the amount of knowledge, including theory, that has come to be necessary to the practice of the latter but not the former. And it of course follows from my above argument that the field of education or any portion of it is not a genuine profession unless it incorporates theoretical knowledge.

Regarding the last two of Professor Ward's propositions, I do not think that I fully agree. I take him to be saying in the fifth proposition that it is not merely education in some special knowledge or skills that is indispensible to a professional education but one that is "theoretic" or strongly centered on theory. I am inclined to argue that not just knowledge and skills but knowledge with a considerable theoretical component is a necessary condition for professional practice. And thus we might speak of automotive engineering as a profession but not automotive mechanics, for the reason that the former requires a considerable amount of theory but not the latter. And I have also argued above that some theory is a necessary condition for knowledge, and thereby a necessary condition for professional practice. However, I am not sure that my view goes far enough in its emphasis upon the role of theory in professional education to be "theoretic education" in Professor Ward's sense of the term.

As to his fourth proposition that technical "education" or one that is not "theoretic" is not genuine education, my inclination instead is to distinguish between professional education that must be theoretic at least to some considerable degree, and non-professional education, which need not be. I agree with him only to the extent that any so-called education that is totally lacking in any theoretical content is not genuine education, since my above argument commits me to saying that some theory at least is necessary to knowledge; and education, in order to deserve this term, must surely have knowledge as its aim and content.

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1. These five propositions come from an earlier version of Professor Ward's paper. However, we both believe that they remain important to the thesis and arguments of his present paper.

2. I offer no metatheory in this paper either as to what I take the domain and definition of "theory" to be (what the different types of theories might be, what constitutes being a theory as opposed to an hypothesis, description, etc.) or what the specific grounds for validation of theories consists in, considering such to be beyond the scope of this response.

3. William James, "The Thing and Its Relations", Essays in Radical Empiricism (New York: Longmans, Green and Company, 1958), pp. 120-121.

4. Paul Camenisch, Grounding Professional Ethics in a Pluralistic Society (New York: New Haven Publications, 1983) is a source which suggested these three characteristics of a profession.

A CASE FOR TEACHING STUDENTS TO THINK CRITICALLY IN THE DISCIPLINES

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1. Introduction. I believe that critical thinking should be taught, not just in courses in formal and informal logic housed in philosophy departments, but in the regular or ordinary courses in other departments. Perhaps indeed it should be taught in most courses, including the introductory level courses, in most or all other departments.

The grounds I have for this belief about teaching critical thinking "in the disciplines" may be reduced to three. (i) Much of critical thinking is not the same from one discipline to the next, especially if the disciplines are in different groups. Indeed, critical thinking is importantly different in different disciplines. (ii) Every student upon graduating will need to be able to do some critical thinking, when, for instance, she (or he) is confronted with a new area and needs to know whether some formula she has learned from an authoritative source holds there, or needs to know how some statement she accepts and has already applied in familiar areas relates to this new area. To know this she will need to know something of what's behind the formulation. Sometimes she will need to know not only something of the reasons behind it but in particular something of, say, the standards of evidence those reasons have been held to, or what perspectives the discipline's traditions ignore as out-of-bounds, or what sorts of experience the discipline's methods screen off as not counting. (iii) Our society needs persons who can think critically. In particular it needs citizens -- individual citizens if possible, but citizens collectively where not -- who know enough of what it is to think critically in a wide range of disciplines to be able to tell the convincers from the members of a discipline, the frauds from the competent members, and where possible the competent from the expert. It would also be desirable if our society had citizens who when experts disagree knew enough to have some judgment as to why, or to recognize that this time they can have no judgment.

These latter two grounds, about several things persons who can think critically will be able to do in our society, I lack space to present in this paper. As to the ground I will present and maintain, I have no "demonstration" that critical thinking is importantly different in different disciplines, and can "point out" no facts which can only be accounted for given it. But I do have some "argumentation" for this ground. This paper will "point up" or highlight certain facts, and it will take up certain objections (in section 4.) as if I were attempting a demonstration. It is intended to convince. The "facts" I point up are about the variety of the methodological norms used in the disciplines (section 3.), the primacy of research in a discipline (section 4.), and the relevance of what a discipline is to what should be taught in it (section 4.).

I will begin (in section 2.) with some remarks intended to locate critical thinking, though not to define it, and then continue (in section 3.) with a more natural description of what thinking critically is like.

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2. *Critical thinking located*. I want to specify (in nine small steps) one or two central cases of critical thinking.

(i) When we engage in critical thinking, we are often thinking about *others*. Self-criticism may be at least as desirable, and surely one aim we have in teaching critical thinking is for our students to develop a capacity for self-criticism — some proficiency in thinking critically about their own views and reasons and a strong propensity to use that ability. Nonetheless critical thinking about others normally comes first, and has a certain priority.

(ii) When we engage in critical thinking, we often focus on the *thinking* of others — their views and reasons. Or at least those of us who have been somewhat trained in critical thinking, well or poorly, so focus. We in the academy may sometimes focus on or at least pay attention to others' conduct. For their conduct may suggest some consequences of their views, or help reveal their views and reasons. But ordinarily we do not pay attention to the others' actions, nor to their loyalties, motivations, or character, even though these may well be more important, outside the academic world, than are views and reasons. Nonetheless critical thinking focussed on thinking has proven enormously useful.

Such critical thinking is "about" thinking in the sense of being *focussed on* it, primarily and in the first instance. Critical thinking "about" thinking has proven possible whatever the focussed-on thinking be about, hence whatever be the subject-matter. Where the concern is with guidance for one's own conduct, critical thinking "about" one's own reasons, whatever they be about, has proven useful, when given a chance. Where the concern is with knowledge purely, critical thinking "about" thinking, whatever the discipline, has helped create progress. Especially has it done so when the views and reasons focussed on are those of our leading predecessors or (if the natural sciences be different in this respect) at least when the thinking is that of others currently in the discipline. Such focussing is also useful pedagogically. It is a means to our students' thinking critically (and often an instance of their doing so). Students develop their ability to think critically by cutting their teeth on worthwhile views and reasons while focussing on them. (This is *not* to say that the views of students, or even their reasons, are never worthwhile. To the contrary, frequently a student's paper, especially towards the end of the course, *is* worth focussing on. A different point is that the criticisms students make in class, even towards the beginning of a course, are often worth transferring to the blackboard.)

(iii) When we engage in such critical thinking — critical thinking about the thinking of others, which is "about" their thinking in the sense that we focus on it, primarily and in the first instance — we are thinking about what they are thinking about. In most cases we are thinking about what their thinking is about i.e. *about the subject-matter* (the subject-matter of their thinking). In most cases we think about the subject-matter *through* thinking about the others' thinking about it. Mill, for example, thinks about pleasure — that's his subject-matter — and I think about pleasure by thinking about Mill's views and arguments. If I think about them critically, and all goes well, I learn something about pleasure, not just about Mill. In such cases we have "dual-attention" (I am inclined to put it). We focus on the others' thinking and at the same time attend to the subject-matter of their thinking (whether we be focussing and attending simultaneously or alternatively: 'at the same time' covers both). This is in most cases.

(iv) But in some critical thinking in which we focus on the views and reasons of others, we end up thinking *only* about the others' thinking, and not about the subject-matter of their thinking. Either we abstract from that subject-matter completely or we are aware of it only incidentally--aware of it as, e.g., what happens to be the content of this pattern of reasons. In these cases we focus only on the pattern there in the other's reasons, or only on the opposition between the other's view and some other view that is voiced.

In these cases we begin to get into logic, either the logic of this other person's thinking or logic more generally. Since norms of logic now familiar were once only implicit in good practice, or in what appeared to be good practice, quite as most methodological norms are now, recall how logical norms become explicit (tracing the process in moderate detail, treating historical accuracy as incidental). The repetition of the above-mentioned opposition or pattern, someone's noticing the repetition in several discussions, say (or in several debates or dialogues), that person's and others' sense of good and bad practice in discussion (or even in thought), their desire to learn what makes good practice good, their and their successors' potential to pin down a bit what that is which makes good practice good, and their desire to communicate what that is, together lead towards logic. For all that leads (perhaps due to certain activities already present in the society) to attempts to pin down what makes good practice good, to write it down as a norm rather than as an example, indeed to formulate it as a universal norm, and to formulate that norm completely enough, in sufficient detail, and with precision so that it can be put to use with confidence. Further, the attempts do succeed, with the help of such focussing as is only on the others' thinking and is on the opposition of views or the pattern of reasons there. So, in sum, all this leads to logic. Further, all this, if coupled with the notion of a variable, leads more specifically to formal logic. All this leads, for example, to the formulating of a square of opposition, and to writing as formulae patterns of syllogistic inference then divided into valid and invalid. Thus we have some explicit norms, some of which are formal norms, with which to judge the consistency of others' views or the validity of others' reasons -- in short, norms for determining how others' thinking hangs together.

(v) At this point it is easy to go astray as to what is covered by 'critical thinking'. Most importantly, it is easy, especially for a logician, to suppose that in thinking critically we are judging only how the others' thinking hangs together, and not how it squares with the world i.e. not at all how the others' views and reasons square with the subject-matter. But when in reading we object that the author hasn't got the facts straight or that the information stated is false, aren't we thinking critically? not ever? Thus while some critical thinking concerns itself only with consistency and validity, some concerns itself with truth as well.

Some explicit norms, especially formal ones, we can in time apply mechanically. Someone might go astray in the opposite direction, contending that it is not critical thinking when we evaluate another's thinking by applying a norm of logic and our way of applying it is "routine" subsumption rather than an "application" which "is in some degree problematic."[1] But does every instance of thinking critically have to be exciting, or even mildly hard work? In many a discipline and not just in logic, one or another norm implicit in good practice has been formulated fully and precisely enough so that in a wide range of cases its application is a matter of routine; this holds for some of the "methodological" norms which, I shall be arguing, are central to critical thinking in a discipline. Also, what is a matter of routine for the seasoned member of the discipline is not so for the beginning student. Further, that same matter may well have presented great challenge to the predecessors who worked out the norm (as did Parmenides, some of the sophists, Socrates, Plato, Aristotle and other predecessors at the founding of logic and, I think, critical thinking). Basically, logic and critical thinking are closely related, so that employing elementary logic, whether in a routine way or not, is thinking critically, often enough.

(vi) When we engage in critical thinking by focussing on the views and reasons of others, we criticize those views and reasons at least in the sense that we *evaluate* them. We place them on the stand as it were for a favorable or unfavorable verdict. Further, often we criticize them in this sense by criticizing them i.e. by making an unfavorable judgment about them, or about something in or about them. In other cases, when we do not "make" such an objection (i.e. do not honestly assert it as being a good objection), often we evaluate the views and reasons by "raising" an objection, or at least by proposing tentatively an initially plausible objection. To cover all these cases, let's say that most often critical thinking involves "lodging an objection." This is not to deny that on occasion we might search for an objection yet fail to find even an initially plausible one. Even on such an occasion, be it noted, we regard the others' views and reasons as subject to judgment pro or con. But most often in critical thinking we *lodge objections*.

(vii) Over time, it is worth noting, engaging in critical thinking creates a *disposition* to look for objections. It creates a frame of mind in an individual, and a mental ethos in the academy if not in the rest of society, strongly disposed to *look actively for* objections. Such a mental culture is useful. But the spirit in which objections are lodged is important. If the concern is with truth and more specifically if the aim is truth-seeking, that's one thing. But (to go straight to the other extreme) when a person lodges objections in order to "score points," or to downgrade the other as lacking in expected ability, learning, or acumen, is that raising of objections an instance of critical thinking? When a student does it in class (and it's not a formal debate), perhaps he or she is thinking critically, or is taking steps towards critical thinking, or into it. Perhaps. When a member of the discipline or of the profession does it in a meeting, we may or may not admire the exhibited skill, but would we say he or she is then engaged in critical thinking? We need not attempt to decide. One clear case of what is *not* critical thinking is pointed out by Passmore. " ... [C]riticism has to be distinguished from cavilling — even if ... it is only too easy ... in a particular case ... to dismiss as cavilling what is in fact a serious criticism. Cavilling consists in raising objections, making criticisms, in a manner which suggests that some very minor weakness ... constitutes a fatal flaw. ... The caviller ... seizes upon an incautious concession ... without looking at the general purport of what is being said or done. ... The caviller does not try to understand; he is intent only upon raising objections."[2] The caviller's aim, likely enough, is not truth-seeking, but only win-seeking. Raising objections with the latter aim receives ample encouragement from much of the rest of our society outside the walls of the academy, and the attitude which win-seeking thus encouraged creates over time is not so useful a disposition or mental culture as the one created by engaging in critical thinking. In any event, cavilling is not critical thinking, and no doubt there are other cases in which because of the manner or attitude or *spirit* involved lodging objections is not critical thinking.

Three further points will suffice to locate critical thinking. (viii) As seems implied above, critical thinking involves *reflection*. It involves "bending back" from something, having some uncertainty about it, fixing attention on it so as to hold it there and, in sum, standing at a distance from it. In particular, we "fix" attention on something even though in "our" critical thinking "we" in the academy (see "(ii)," above) are at the same time "focussing" on something else, namely, on some views or reasons about it; we have dual attention. Indeed, dual attending may be what's meant by the common philosophical remark that in reflection one is "distancing" oneself. Of course that talk of "distancing" may be literally about space when we are reflecting on, say, the just-now glimpsed look on another's face, or on some present situation such as the newly noticed absence of bounce in a friend's stride. Also, in saying that critical thinking involves reflection, I am not saying that critical thinking is the only kind of reflective thinking.

(ix) Critical thinking is *not* the best kind of thinking there is. Higher than it because more difficult, sophisticated and challenging, and also better than it because more fruitful when successful and in the long run more useful to society, is "imaginative" thinking, as Passmore now calls it. Frequently imaginative thinking in a discipline involves seeing a possibility. Sometimes novel imaginative thinking in a discipline involves inventing a perspective (whether the perspective be within the discipline or about it at another level). But imaginative thinking in a discipline also involves lodging objections. Critical thinking is preparation for imaginative thinking in a discipline. It also is part and parcel of it, when the imaginative thinking is successful or even promising. Indeed, imaginative thinking Passmore at first called "critico-creative" thinking (a "barbarous" hyphenated term, yes, but accurate).

This suffices to specify two central cases of critical thinking. In both we focus on another's views and reasons, in one we at the same time attend to the subject-matter the other is thinking about. There are other central cases, including ones in which students focus first and primarily on the subject-matter.

(x) Finally, as a way of bringing together some of the above points, the following: on the whole and in various ways, critical thinking builds upon logic, information, methodology, and a truth-seeking spirit, and in turn is built into but surpassed by imaginative thinking. Critical thinking centrally involves making criticisms or otherwise lodging objections.

3. *Critical thinking described, using examples of norms which vary widely.* I now turn to a more natural description of critical thinking, of what it is like to think in a critical manner, reminding us of this "from the inside" as it were. This gives more attention to the "methodological norms" barely mentioned so far. It distinguishes three situations in which critical thinking occurs, namely, when "applying" such a norm i.e. when applying it in a straight-forward manner, when bringing such a norm to bear on a not-so-neat case where deductive subsumption is out of the question, and when evaluating the norm itself.

Those of us in higher education (and of course many other professionals) think critically, in our disciplines. For one thing, we *read* in a critical manner — putting, in imagination or in graphite, a "✓" over against a "fact" or figure we disbelieve, an "!" where the writer's perspective is unconscionably out-of-date, or simply a "?" near what we have doubts about, or, in the other direction, a "yes" by what we believe and see as important.

This critical manner of reading is *grounded in* the methodology of the particular discipline in which we have been trained. It is not simply that we know our facts, as if we had performed prodigious feats of sheer memorization of "information" (particular facts, verified laws, stock criticisms, etc.). Rather, because we know our business, we not only know our facts but also the "methodology" of our discipline — its basic "rules" or guidelines, its methodical "methods" or general procedures or processes of a comparatively catch-as-catch can sort, its standard tactics and routine dodges. Because we know this, we are alert, when we read, to likely sources of error, and to heretofore-fruitful kinds of moves.

We are similarly alert when we do our own independent research. We have absorbed examples of good thinking, if not formulated rules for it. More particularly, we have absorbed examples of controlled thinking, thinking controlled by (among other things, but first among the other things) the making of criticisms. We have absorbed this from reading texts or doing experiments. So we have the skill to apply the established "norms" (the standard methodology) of our discipline to old questions and new, and the propensity to do so.

For instance, some of us are in the literary culture, the second of C. P. Snow's two cultures of twenty-five years ago (and remember, Snow himself soon predicted that the social disciplines would be "a third culture" and, more important, realized from the start that "the number 2" provides "a good deal less than a cultural map").[3] More specifically, if we are in, for instance, classics and are studying, say, the Greeks' values, then we are alert to the errors which come, not simply from relying on a translation, but from translating the key value-words at all. We know the classicists' norm, "Transliterate the value-terms." We are aware that translating adikos, say, is a source of error whether it be uniformly translated as "unjust" or be variously translated according to "the meaning" it "has" in the given context.[4] We apply that norm. Similarly, if we are in Snow's scientific culture in, for instance, chemistry, we know to attend carefully to that part of the journal article which reports, not just the results, but how the experiments themselves were conducted. And thereby we know to re-read our own reports with care, hence to write them up accurately, hence to carry out or oversee our experiments conscientiously, hence in the first place to design those events with foresight, foreseeing criticism. Somewhat similarly, in a social science, say, developmental psychology, we know the norm, "Attend to what the circumstances of the series of interviews were." Again, we know how to apply statistics, with its standard rules of inference and tests of significance, to the reported or apparent results.

Further, our critical manner of reading, planning, executing, testing, writing, checking--in short, our critical manner of thinking--is exhibited in new areas, and in dealing with new questions and old, where we cannot "apply" the standard methodology so much as "bring it to bear." For a familiar if non-academic instance, think of a senior judge on the appellate-level, confronted in court and in his chambers with a rather novel case on which he must somehow come to some determination. The judge will cope, and often well. Similarly, so may the ancient historian, when confronted with encroachment into her field by, say, anthropologists, who bring with them ways of looking at the "society" of Homer's heroes which are new to her. So may the physicist, when confronted with a male undergraduate throwing a plate in the air in the Cornell cafeteria -- what are the equations of that wobble? In such instances, we need somehow to "bring to bear" on the question the standard methodology of our discipline and our accumulated information, and some other things. These other things include our own lived experience in the discipline, our own increasing sophistication about our discipline's vocabulary and concepts with the attendant increase in our ability to use those concepts in controlled yet flexible ways, and, say, a colleague's rather-novel research strategy. Usually we will cope, and often well. In such instances, too, our critical thinking is grounded in the norms, the "methodology," of the discipline in which we were trained.

In addition to the continuum along which we "apply" our discipline's standard rules and routines and sometimes "bring to bear," like the judge, our own discipline-grounded intellectual power to cope with the not-so-neat, there is another situation of critical thinking. Here the questions are about the methods and rules, the procedures and guidelines, the processes and tactics now standard or acceptable in our discipline. I suppose not all of us are lucky enough to come upon a first-order question which forces us to think in a critical manner about some established norm we've been following, or about the grounds underlying it and related norms, or about the current strengths of our discipline and the attendant self-imposed limitations (limitations of scope, "relevance," and the like). But surely all of us are, in Passmore's words, "alert to the possibility that the established norms themselves ought to be rejected, that the rules ought to be changed, [i.e.] the criteria used in judging performances modified."[5] Or, beyond this, that one of the values embodied in the established norms needs to be abandoned. For instance, need philosophy aspire to the rigor achieved only by deductive arguments, and reject as without value anything "less"? what aim is thus served? what questions are thereby ruled off-limits? Moreover, many of us do have occasion to try to evaluate the standard methodology and the embodied values of our discipline, and are willing to do so whatever be the outcome -- whether it be to reject or to modify or to accept with greater confidence the ways and means in which we have been trained. Further, we do have the capacity if not skill to do so, to question and evaluate those norms and values. To be thus alert, willing and capable is certainly to have, at least in one's own discipline (as distinct from elsewhere in one's life), what Passmore dubs "the critical spirit."

Further, this third sort of thinking in a critical manner, too, involves the standard methodology. Such thinking is not simply "about" that methodology. It is not (or is rarely?) to evaluate the established norms "externally," from some totally independent viewpoint, some so-alien perspective. In general, to think about an established norm in a critical manner is always (?) in part to use some other part of the discipline's methodology, some other norms of the discipline, in order to help evaluate the norm in question. This (even if not always so) makes it doubly appropriate to say that in this situation we "reflect on" our discipline's methodology -- "reflect on," as distinct from "straight-forwardly apply" and "bring to bear."

So much for what thinking critically is.

Clearly, the norms used when thinking critically are different for different disciplines. That classicists' norm couldn't be used by the chemist. Nor that chemists' norm by the classicist. More systematically, within the natural sciences six rather different "varieties of scientific methods ... may be distinguished," the six involving postulation, experiment, analogical models, taxonomy, statistics, and genetic development. Incidentally A. C. Crombie, who distinguishes these six "methods" or "styles of ... thinking," stresses their emergence from the "general" growth in late medieval and early modern European "society" of "a research mentality," as he calls it, a mentality or mental culture disposed to "look actively for problems" rather than aim "for an accepted consensus without argument."[6] Within the humanities, obviously the styles of thinking, and so the particular methodological norms used, are different for different disciplines. Examples need not be multiplied. Granted, again, some methodological norms are similar or the same within a group of disciplines. Also, I would grant that some methodological norms are similar or the same across most or all the disciplines when the norms are formulated in highly general terms. For a plausible example, consider the norm, "Look for negative evidence, for exceptions to prove--i.e. to probe, to test--the rule, for counter-examples to the hypothesis." But to think of a discipline or its methodology in terms of such a highly general norm does not do it justice; the characterization is too general. When formulated on a proper and useful level of generality, methodological norms differ across the disciplines.

Such norms are among those invoked when a member of a discipline makes a criticism of what another member has said or done, or is self-critical. Making criticisms, or trying to, is central to critical thinking. Hence critical thinking is different for different disciplines.

4. Objections considered and the argumentation completed. (i) It will be objected that other norms presupposed in making criticisms are the same across the disciplines. I agree that some are. Norms of logic, including formal logic, for determining consistency of views and validity of reasons have been noted. Also the same across the disciplines, perhaps, are certain norms of character, such as intellectual honesty.[7] Seemingly the same, although perhaps so primarily in name, are some "canons of workmanship" (Gerald Holton's phrase), such as "Exercise care." Apparently different, although still to be distinguished from methodological norms, are norms of writing, the implicit norms exhibited by often-obvious differences in disciplinary style — differences as to explicitness of organization, straight-forwardness of presentation, fullness of argumentation, and the like. As for norms in so-called informal logic, such as "Avoid the straw man 'fallacy'" and "Avoid equivocation," many of these may be the same across the disciplines although applying them often requires having information from the particular discipline, including knowing the meanings of some of its technical terms. But whatever the sameness of such other norms across the disciplines, this is relatively unimportant. For the methodological norms are more important.

(ii) Someone may respond that this is arbitrary. But there is reason for thinking methodological norms are more important. Such norms are the primary norms used in research, and research is the home base of any discipline. The research done in a discipline — the results of that research, yes, but especially the manner in which the research is done, the methods used, its style of thinking — makes a discipline what it is. This activity over the years does much to sustain and modify the form of life in which members of the discipline participate. The institution thus created of course has other roles, some quite vitally important, which its members fill; two of these, besides researcher, are instructor (which involves building into the student some of the discipline) and consultant. But how it engages in research is conceptually primary to what a discipline is. So among the norms used in the discipline those primary in research are the most definitive of the discipline (and are so whether they be distinctive of it i.e. peculiar to it, as I am in effect arguing they tend to be, or not). The methodological norms are more important.

(iii) It will be objected, "What a discipline is doesn't determine what should be taught in it. So what has been argued doesn't determine the conclusion drawn; that is, even if critical thinking is importantly different in different disciplines, that doesn't determine that students should be taught to think critically in the disciplines." The objection, as thus stated, has a key phrase, "doesn't determine", which is unquantified. The phrase may mean "doesn't completely determine," or it may mean "doesn't at all determine." I agree that what a discipline is doesn't completely determine what should be taught. Dewey and Hirst are both right in much of what they say in this area. Pedagogical and especially educational reasons are relevant as well. But I disagree with the objection if it be understood in the other way (which is the way needed to prove my argumentation fallacious). Surely what a discipline is is relevant to what should be taught in it. If argument be needed here, note that what information a discipline contains at present is taken by everyone to be relevant to what should be taught in it.

(iv) Still, why, positively, is what a discipline is relevant to what should be taught in it? In particular, even if a discipline is shaped over the years and its core identity created by the methodological norms used in research so that its research methods partly define what it is, why should this make a difference to what should be taught? One reason, I think is this: What a discipline is is relevant "by itself" to what should be taught in it because presenting a discipline as it is has value. Its showing integrity has value. Now, this of course needs explaining. Further, this reason — this "reason in itself," my claim about some value of integrity in presentation making what a discipline is "relevant by itself" — is needed to complete the ground presented in this paper. Yet I can only start to get clear on it. So it may turn out in the end that the other two sorts of ground mentioned at the beginning of this paper provide the only satisfactory argumentation. It may be that the relevance of "is" to "should" comes here only from the things which a person who knows what it is to think critically in a discipline can do — things such as telling the competent members of a discipline from others, and not automatically relying on "what" one has learned when confronted with a new area. Those are reasons of the means-end sort, the sort familiar to all. Nonetheless also operating here is a sort of reason no longer much heard in our society, and this old-fashioned reason, I think, is a good reason, one which does show the relevance of "is" to "should" positively. Towards getting clear on this reason, I offer the following.

From what point of view does a discipline presenting itself as it is have value? Not, or not only, from the point of view of the academy, in its pride in itself. Nor from the vantage point of a status hierarchy which would imagine research to be of greater importance than instruction. The point of view from which a discipline's presenting itself as it is has value is not merely that of the discipline itself. Nor, finally, is it a point of view motivated at bottom by the psychic need of one or another curmudgeon-like professor for a self-image to sustain the confinement of his activities to those narrowly focussed on scholarship or lab and perhaps a few promising graduate students (or, as he may be heard to put it, to "my research" or "The Discipline"). However, I suspect that some such professors are aware of the point of view from which presenting a discipline as it is has value. What point of view is this? Consider some other cases. The integrity of a person is worth showing when it's been questioned, but even when it is not in question we admire a person for his (or her) integrity. In Sophocles' drama, for instance, we appreciate the hero, the heroic temper; we appreciate, say, Ajax, once he realizes what he has done when temporarily out of his mind, for the integrity he then shows and manifestly has. The integrity of a profession we also respond to as having value. For instance, the remarks of senior C.B.S. newsmen recently, upon what seemed to them release from a regime too much taken with the quantity of money earned and too little concerned with the quality of the news produced, struck a responsive chord in many of us. The integrity of a craft was very important historically, I suspect, especially to the Greeks, and even today some of us in the academy and elsewhere in the "upper" reaches of society can still appreciate a craftman's adherence to the canons of good workmanship. Similarly, as with Ajax's character and the newsman's profession and a sculptor's or furniture-maker's craft, the integrity of a discipline we also respond to as having value. The point of view from which we thus respond to a discipline is, as the other cases show, not one confined to a mere discipline, but a point of view from which showing integrity has value generally. What this general point of view is may be further clarified by considering other cases of opposite sorts. Even if a person be a coward, say, still, if he is not hypocritical about it, we grudgingly respect his being what he is i.e. his conduct matching his character. A profession which requires deception, on the other hand, we feel to be lacking. Prostitution is the classic example.

Is this a legitimate point of view? The fact that we do not appreciate all that has value from it is no argument against the point of view. Nor is the fact that an institution, group or embodied idea has ceased to have such value. The integrity of a tribe, historically first though the celebration of its ethos may have been, we do not appreciate, and arguably it no longer has value. Further, I would suggest that in theology some have maintained the legitimacy of the general point of view from which in various cases showing integrity has value, and have further explored what the point of view is. At any rate and finally, the legitimacy of this point of view is highlighted, I suggest, by a further remark, one which points to context rather than to means-ends: the remark that even a discipline's being what it is -- showing itself as it is -- has value in a society in which too often we call on others to tell us what we want to hear, and too often respond to such calls by meeting the want. The contrast highlights the legitimacy. Bringing out in this way the value of a discipline's presenting itself in teaching or instruction as it is does not, I would suppose, increase that value, or literally heighten it, but only reveals and so confirms it. For thus to point to context for a contrast is effective, it would seem, because what the context is in contrast to (in our case, a discipline) already has value from a legitimate point of view.

(v) I have said nothing directly about the compatibility of teaching students to think critically with teaching one's discipline. Further, if the implications of what I have said for that be put aside, I have said nothing about the feasibility of professors in the various disciplines teaching critical thinking.

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1. Frederick L. Will, "Rules and Subsumption: Mutative Aspects of Logical Processes," American Philosophical Quarterly 22 (1985): 144. This is a worthwhile article.

2. John Passmore, The Philosophy of Teaching (Cambridge, Mass.: Harvard U.P., 1980), 173, order mine.

3. C. P. Snow, The Two Cultures and the Scientific Revolution, 2nd ed. (London: Cambridge U.P., 1963 [1959]), 69--71, 9.

4. This norm, about transliterating value-words, is due to Arthur W. H. Adkins, a classicist now part of the Committee on Social Thought at the University of Chicago who, we can say, invented the sub-specialty of Greek Values with his first book twenty-five years ago. Adkins has begun each of his three books on Greek values with, in effect, the same first chapter. That chapter explains and defends the methodology.

5. Passmore, The Philosophy of Teaching, 170.

6. A. C. Crombie, "Philosophical Presuppositions and Shifting Interpretations of Galileo," in Theory Change, Ancient Axiomatics, and Galileo's Methodology, ed. Jaako Hintikka, David Gruender, and Evandro Agazzi (Dordrecht: D. Reidel, 1981), vol. I, 283-284.

7. Relevant in this area is Michael Stocker, "Intellectual Desire, Emotion, and Action," in Explaining Emotions, ed. Amelie Oksenberg Rorty (Berkeley: U. of California P., 1980), 324-338.

WHAT DOES "TEACHING STUDENTS TO THINK CRITICALLY" ACTUALLY MEAN?

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In 1977 Howard Bowen, one of the leading researchers in higher education, compiled a "catalogue" of the goals of colleges and universities across the United States — goals that were identified in over one-thousand statements of educational mission by noted philosophers and educational critics, reports of commissions and faculty educators committees, and public pronouncements of leading educators. One of the "top ten" cognitive goals is "Rationality" defined as i) ability to think logically on the basis of useful assumptions, ii) capacity to see facts and events objectively - distinguishing the normative, ideological, and emotive from the positive and factual, iii) disposition to weigh evidence, evaluate facts and ideas critically, and to think independently, and iv) ability to analyze and synthesize. Although there are nine other cognitive goals, and many other non-cognitive goals, listed in this comprehensive survey of college missions, it is clear that in the past several decades college educators have placed highest value on the development of thinking skills. This emphasis on reasoning has surpassed such other intellectual goals as developing esthetic sensibility and creativity or even the accumulation of substantive knowledge and certainly is considered far more important than the moral, emotional, personal, or physical development of the individual. "Development of the whole person" may be the leading catalogue mission statement but teaching skills in critical thinking is _the_ most important goal.

In his paper Neale Mucklow has made the case that critical thinking should be taught through the traditional disciplines and departments and _not_ relegated to specific philosophy courses in logic or "principles of reasoning". In this reaction paper I am, in a sense, taking several steps backwards -- not for the sake of digression nor to muddy the intellectual waters -- but to examine this pedagogical concern from a wider, or at least, different perspective. Mucklow's paper, for me, raised several questions: what, exactly, is critical thinking -- at least, how is it best understood as an educational goal? Secondly, why are we now so widely concerned about critical thinking? There have been, of late, numerous conferences, books, and meetings on the topic. Is it that we're not teaching it properly anymore? Or, that we don't know what it is? And, thirdly, as directly addressed in Neale Mucklow's paper, where, and also how, should it be taught in the undergraduate curriculum? Is it most effectively taught through traditional disciplinary courses?

Let us turn to the second question initially; whatever exactly it is, why are we hearing and reading so much about the need to infuse undergraduate learning with critical thinking? It is already a widely and readily acclaimed goal of higher education. Are we to understand that we are failing to teach critical thinking? Allow me to briefly play the role of social commentator, drawing upon informal discussions with colleagues across the liberal arts as well as periodic reading in such national publications on higher education as "The Chronicle", "Change", "Liberal Education", and "Teachers College Record". A listing follows of some quite pejorative, and in some instances paranoid, responses to these questions.

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The first explanation is entitled, "let's beat down the disciplines." The move to teach faculty how to teach critical thinking is a means of slipping in programs of faculty development through the front door. It is, at best, an attempt to improve faculty teaching skills and, at worst, an effort to weaken the tight grip of the overly specialized disciplinary bosses and introduce interdisciplinary coursework.

The second is labeled, "why, it's just a liberal education". Critical thinking is - when you get right down to it - almost synonymous with becoming liberally educated. Moreover, critical thinking is a broad catch-all phrase that offends no one. It is a value free skill, so it is a goal everyone can agree on.

Third, "after all the intellect is most critical." This is a movement to re-assert the primary mission of American higher education: intellectual development. Colleges, undergraduate curriculae, are not the place to be overly concerned with physical, moral, or affective development - nor even professional and career training. Intellect is primary.

The fourth explanation is entitled, "those sneaky social scientists". There is a growing sense that we in higher education need to make effective use of the recent research in the social sciences - especially psychology. We now understand better than ever how people learn, the best ways to motivate students, and what teachers can do to effectively teach. Instructors trained in traditional content-area doctoral programs, however, are wary of diluting their teaching, weakening the passing-on of disciplinary knowledge, methods, and mores by using teaching strategies and materials that draw upon pycho-social research on student learning. In other words, the teaching of critical thinking may be a means of introducing some degree of pedagogical awareness and sensivity to the hardened, disciplinary-oriented faculty member.

Fifth, "let the philosophers do it". Critical thinking is what is taught in such philosophy department courses as "logic" or "principles of reasoning". Let them take care of it. Neale Mucklow successfully argues against this specific, limited understanding of the expression.

And, finally, "why all the fuss?" Like most of the overt goals of higher education, critical thinking is nevertheless tacitly learned through the experience of disciplinary learning in many different classes with many different faculty over a period of time. There is no need to become any more explicit or any more concerned.

By offering these interpretations, I do not intend to discount the principled and, indeed, for us at least, enjoyable process of pure and disinterested analysis of "critical thinking" as an educational concept. However, without suggesting which, if any, of these popular interpretations is most accurate, I trust this summary helps establish a context or backdrop for our dialogue.

To return to the first question, what is critical thinking? There are many, many sources to turn to for extended, detailed definitions and analyses. In this reaction paper, I will refrain from citing epistemological studies on human reason and, rather, turn to other quite specific and concrete definitions developed for educational practioners -- for day-to-day use. This first example was presented by Arthur Cohn in his book on developing objectives for college courses. He outlines the following objectives requiring increasing levels of intellectual competence: 1) knowledge 2) comprehension 3) application 4) analysis 5) synthesis and 6) evaluation. The second listing is extracted from a mundane, but ubiquitous, force in our lifes: The United States government. Its updated Dictionary of Occupational Titles includes sections on skills in working with people, things, and data. Data is considered synonymous with information ... and with knowledge. Data, according to the manual, is intangible and includes numbers, words, symbols, ideas and concepts. Another hierarchical listing -- in ascending order of intellectual complexity follows: 1) comparing 2) copying 3) computing 4) compiling 5) analyzing 6) coordinating and 7) synthezing.

Finally, to draw upon a source known to all of us, Bloom's Taxonomy of Educational Objectives, this again is a hierarchical listing -- moving from the lower, simpler, more concrete skills to the higher, complex, abstract intellectual abilities.

1) comprehension
2) basic computation
3) transcription
4) simple comparison/contrast
5) compilation of information.
6) ability to translate
7) interpretation & extrapolation
8) application of concepts and rules
9) analysis of elements, relationships & organization principles.
10) synthesis
11) evaluation and judgement
12) creativity

Although these lists vary in detail and vocabulary, I believe they are representative of our general understanding of what is meant by "critical thinking". Skills in critical thinking build upon, but are not fully contained within, basic comprehension; compiling, sorting, or memorizing information; acquiring facts and data; and translating or transcribing. It is not until we reach the level of such abilities as analysis, interpretation, evaluation, and application that we begin to feel comfortable and readily assert: yes, that is critical thinking.

The teaching of such skills is important; indeed it is critical. Nevertheless, critical thinking, thus defined, is not an end in itself nor is it the highest achievable educational goal. There are intellectual skills and attitudes (or, perhaps, qualities would serve as a more accurate term) that build upon and surpass "critical thinking"; they are generally higher in intellectual value and complexity. Neale is careful to point this out in his paper on his discussion of imagination. I would add synthesis (the conceptual integration of knowledge to discover new facts or develop new concepts, theories, or interpretations; to view data and ideas in a connected manner); intellectual integrity (understanding the idea of truth and its contingent nature. A disposition to seek and speak the truth and be conscientious in inquiry); intellectual tolerance (freedom of mind. Openess to new ideas. Willingness to question orthodoxy. A full appreciation of intellectual and cultural diversity); ethical judgement (an informed, critical intellect capable of recognizing and making humane and discriminatory moral choices -- sensitive to the limits of rationality in the face of moral dilemma) and creativity. No single instructor, course, discipline, or four-year college curriculum could, or even should, realistically expect to reach these, the highest goals -- although we should try, and at least lay the foundation for an individual lifetime of seeking to fulfill these high ideals. Critical thinking, on the other hand, probably cannot be taught in a single class or discipline, or by a single instructor, but it is achievable -- and, to some degree, measurable -- within the four year undergraduate program. Whether or not it is taught in interdisciplinary classes, traditional liberal arts courses, advanced disciplinary courses or selected philosophy courses it is a more manageable, tangible and attainable goal. It lends itself well to quantative forms of measurement and data accumulation. Arguments to state legislative bodies and others to the effect that higher education is worthwhile can be defended with hard data. The danger, of course, is that we may become overly enamoured with the generic, value-free skill of critical thinking at the expense of other, at least equally, important (if more problematic) pedagogical objectives.

While acknowledging that there is more to education than teaching critical thinking --- are, then, the disciplines the best place to teach the skill? To close with one final twist in perspective, perhaps placement in the curriculum is a largely irrelevant criterion. The issue may revolve around exposure to effective teaching. Perhaps it is those who work with instructors who generate enthusiasm to learn; dexterously guide students in comprehending and analyzing concepts, theories and principles; teach students how and why to think critically and independently; and maintain personal respect and genuine concern for students' intellectual growth -- those are the lucky individuals who emerge with strong skills in critical thinking -- no matter which discipline or what particular array of courses has been taken.

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1. H. R. Bowen, Investment in Learning: The Individual and Social Value of American Higher Education (SanFrancisco: Jossey-Bass, 1977).

2. D. Sloan, "Teaching of Ethics in the American Undergraduate Curriculum", 1876-1976 The Hastings Center Report 1979, 9 (61): 21-41.

3. Vide: C. Meyers Teaching Students to Think Critically:A Guide for Faculty in All Disciplines (San Francisco: Jossey-Bass, 1986).

4. A. Cohn Objectives for College Courses (Beverley Hills, Calif: Glencoe Press, 1970).

5. U. S. Department of Labor The Dictionary of Occupational Titles (Washington D.C. U. S., Government Printing Office, 1977, 4th ed).

6. B. Bloom (Ed) Taxonomy of Educational Objectives (New York: David McKay Co., Inc., 1956).

THE PARABOLIC CRITIQUE

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In a paper I presented at the 1982 annual meeting of SAPES, "Rabbits, Learning, and Virtue," I asked what view of persons is sufficient for the most coherent understanding of "X is learning to be Y" where X is any particular person and Y is any virtue. I contended that story or narrative along with context and the intentions of person are the sufficient conditions for the most coherent understanding of learning. Professor West in his response argued if we adopt a narrative view of self there is no way to determine within story alone why we ought to adopt one story over another. I want to respond to his critique by contending that story can be evaluated by story without turning to philosophy to do so. Our disagreement is one more in the long conflict between poetry and philosophy. In that quarrel the philosopher argues as follows:

1) Myths (story) cannot be evaluated and must be simply believed or not believed.
2) Only through reason (philosophy) can stories be evaluated.
3) We must evaluate our stories. Therefore, we must rely on reason or philosophy to evaluate our stories.

I claim that the second premise is false, and that the conclusion is therefore not justified. How can I make out this argument? The position I want to support is that certain types of story can be evaluated by parable. To do so I shall discuss the following topics: (1) story, (2) parable, and (3) a parable of Jesus. Now let us turn to story.

Plato, in his contribution to the old quarrel between the philosopher and the poet, attempted to lead us from the signless dessert of myth and into the well charted regions of reason and philosophy. We can get a good idea of what story means if we understand what Plato was attacking. At the outset an important distinction must be made between story and myth. I am using story in the sense of narrative form. It is an imaginative construction rooted in image and metaphor in contrast to a logical construction rooted in experience, concepts and relations. Myth is one type of story. Stephen Crites in an interesting article, "The Narrative Quality of Experience," published in the Journal of the American Academy of Religion in 1971, clarifies the nature of story and myth. He contends that myths are not simply consciously created fictions of imagination. They lie too deeply in our consciousness for that; "... they form consciousness rather than being among the objects of which it is directly aware."[1] Myths form the horizons of people, "People live in them."[2] In addition, mythopoeic stories are also "anonymous and communal."[3] Finally, no telling exhausts these stories. They are not directly told. However, these deep seated, fundamental forms of consciousness, are recited by people through stories of their own creation. These recitations are the creations of peoples and are formed by their social, cultural, historical situation or context. Each recitation created finds its roots in the deeper, underlying myths of its horizon. Crites places myths and the created stories under two separate headings: sacred stories and mundane stories, respectively. If people "awaken to a sacred story" that "forms the very consciousness that projects a total world horizon, and therefore informs the intentions by which actions are projected into that world," then mundane stories

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are the created, objectified images of a people in their attempt to understand the horizon in which they live.[4] These mundane stories may carry the authority of scripture for these people. And in so doing some mundane stories take deeper soundings than other. Through such mundane stories the sacred stories resonate.

To illustrate this distinction between sacred stories and mundane stories consider its implications for the identity of persons. Persons living in a cultural, historical, social, physical context, and within the horizon of their sacred story, form a practical/moral identity. Their telling mundane stories which resonate the sacred stories forms the basis of their own personal identity. The identity of a particular person living in a particular environment is not only the practical/moral identity of a person who is a farmer, but of that person who is, for instance, a Christian farmer. This would result from his retelling for himself the mundane stories of the New Testament and Old Testament which themselves are the attempts of a people to understand their horizon.[5] With this view of story and something of its nature and complexity in mind we can gain a better understanding of what Plato is rejecting in his quarrel with the poets.

Plato focused attention on mundane stories, those told by Homer and Hesiod. He believed that they cannot be evaluated and must be either simply believed or not believed. And given his view of the unpredictable, excessive behavior of the Olympian gods as portrayed in Homer's Iliad and Odyssey and Hesiod's Theogony and Work and Days, we can see why he rejected them and searched human reason and experience for the life that is truly virtuous. The virtuous life must rest on something other than the authority of the sacred scripture, the mundane stories of Homer and Hesiod. Thus he sought to evaluate what is valuable in these stories by turning to reason or to philosophy. I contend however that we do not need to turn to philosophy in order to evaluate stories. Rather, we can turn to a device that is born of story itself, the parable. Let us now turn to the nature of parable and particularly the function of parable as critique of story. As we do so, however, we must turn to biblical scholars, specifically those who have studied the teachings of Jesus. What they say applies to parable form in general and not simply to the parables Jesus told. For clarity I shall attend to an important parable of Jesus in making out my argument.

First, what is a parable? It is not an allegory. Following Julicher, Dodd in The Parables of the Kingdom contended, "In all allegory,... each detail is a separate metaphor, with a significance of its own .... To take a biblical example, in Paul's allegory of the Christian warrior the girdle is Truth, the breastplate Righteousness, the shoes Peace, the shield Faith, the helmet, Salvation, and the sword Word of God."[6] In contrast a parable whether it is a "simple metaphor, or a more elaborate similitude, or a full length story, presents one single point of comparison. The details are not intended to have independent significance."[7] Also, in contrast to allegories with their hidden meanings, parables are simple, vivid stories whose meaning is simple and self-evident to the hearer or reader. If parables are not allegories, how do they function? Dodd, again following Julicher, argued that the parables as literary devices have one central function and that is instruction. But about what do they give instruction? They give moral and spiritual instruction about living in the kingdom of God. We should not look in the parables for hidden meanings and correspondences with the whole Christian story. The parables reveal to us the moral structure of the universe, and once we know it we can conduct our lives in terms of it. Through the parables we can learn what God wants us to do in his kingdom even though we cannot learn much about how we fit into the cosmic scheme of things. It is that moral structure that we share with ancient man. Dodd's view of the nature of parables has been generally held until quite recently.

Recently, however, some students of parables contend that parables are rhetorical devices for self-confrontation. The parables are sticks of dynamite that explode our self-created world, make us confront ourselves, and in the act of choosing create ourselves. Scholars such as Jeremias, Bultmann, and John Dominic Crossan (a structuralist) developed this view. Jeremias says that, "...each of them was uttered in an actual situation in the life of Jesus and a particular and often unforeseen crisis .... They were preponderantly concerned with a situation of conflict, they correct, reprove, attack: for the greater part though not not exclusively, the parables are weapons of warfare."[8] In taking this position Jeremias and Crossan are rejecting both the allegorical view of parable and the moral view of parable, the view that each parable teaches one distinct moral lesson. They do so, particularly Crossan, because of their understanding of the literary structure of myth and parable. The approach I take here then depends upon the work of literary critics, but it goes beyond them. Textual and historical criticism are of inestimable value in understanding and interpreting parables. We have learned to distinguish parable and allegory and to treat the parable as "a metaphor or simile drawn from nature or common life, arresting the hearer by its vividness or strangeness, and leaving the mind in sufficient doubt about its precise application to tease it into active thought."[9] And we now understand that the parables function as "weapons of warfare," weapons that Jesus used in his controversial dialogues with his hearers. The parables are metaphors that function to subvert our mundane stories. And in that subversion they allow us to see and hear what those stories obscured. One more important point must be made about our view of parables.

Biblical scholars who take the historical-critical approach overemphasize the sayings of Jesus, the intent of the writer (such as Matthew or Mark), and the time of writing. They seem to ignore the hearer of the sayings of Jesus. It will be difficult to understand why Jesus spoke the way he did if we do not understand how his hearers are likely to take what he has to say. For example, only if we understand how a scribe usually thinks will we understand how the parable functions in response to their questions, that is, why Jesus tells the parable of the Good Samaritan just the way he did. If a scribe thinks and lives on the basis of (1) a horizon, (2) interpretations of the mundane stories told within that horizon, and (3) an identity created within that framework, then we must understand his society and culture. Textual, literary, and historical critics tend to ignore that the scribe brought a social, cultural background to the situations in which Jesus talked and listened and do not do an adequate job of connecting his parable to the scribes to whom he talked. Thus, the interpreter of Jesus' parables must examine them in their lived situation of dialogue. To our interpretation of the parable, in this case those of Jesus, we must listen not just to the historical and literary critic but also to the cultural anthropologist. Cultural anthropology is of inestimable value in connecting the lives of people to their deepest narratives. This approach to the parable can be called dialogical hermeneutics.

Dialogical hermeneutics arises from the inadequacies of historical and literary criticism. It is rooted in the belief that persons everywhere make choices, those choices are based on beliefs, and those beliefs have the persuasive power they do because of the authority of the beliefs they live by. As an example, the beliefs of the Jewish people of Jesus' day are their stories of God's shepherding his people. When conflict or difficulties occur someone arises to interpret the new situation in light of the sacred and mundane stories and in light of the new situation. Jesus was part of this tradition. He confronted people who had isolated a portion of that narrative tradition and had hardened it into the full truth about God and his kingdom. They accepted only what fit into their mundane stories, their recitation of the Way. To attack this hardened recitation, or idols of the kingdom, Jesus used parables. He sought to subvert the narrower horizons of his hearers, their idols, so that they could hear God. And in hearing and being God's people they live in His Kingdom now and in the future. With this view of the nature and function of parable in mind, particularly set within the context of a larger dialogical hermeneutics, we can now turn to the structure of parable.

Crossan has analyzed the structure of the literary form we call parable (any parable and not only those of Jesus).[10] Depending upon Roland Barthes and Algirdas Julien Greimas, French structuralist, Crossan outlines the structure of the parable. His argument is that "there is in every parabolic situation a battle of basic structures. There is the structure of expectation on the part of the hearer, and there is the structural expression on the part of the speaker. The structures are in diametrical opposition, and this opposition is the heart of the parabolic event. That is, the hearer expects that a certain Object (O+) will be given by a certain Giver (G+) to a certain Receiver (R+) and that the opposite Object (O-) may also be given by a certain other Giver (G-) to a certain opposite Receiver (R-). What actually happens in the parable is the reverse of what the hearer expects. The two possibilities are outlined in Figure 7."[11] Crossan's view helps us clarify the viewpoint of dialogical hermeneutics. The parable functions in a relationship between two or more persons in which one person through story is attacking the mundane or sacred stories of the hearer. And in so doing is attempting to lead that person to become aware of not only their story, but also the limitations of that story, whether it be their sacred story (their horizon) or their mundane stories.

Now let's illustrate this view of parables with one Jesus told, as recorded in Luke 10, The Good Samaritan. According to Luke, Jesus and his disciples were traveling to Jerusalem. He had been teaching in the area of Galilee for sometime and "he set his face resolutely towards Jerusalem."[12] After sending out the seventy to prepare his way, they returned telling of many wondrous events. (It is possible that Jesus was followed by seventy or eighty people.) During their journey they were sitting listening to Jesus, and a scribe stood up to ask Jesus a question. He was not hostile; he showed courtesy by standing and addressing Jesus as teacher. But it was his way as a scribe to ask pointed and penetrating questions. To those sitting around who were unlearned, who were not masters of the Torah, the questions and the manner may have seemed hair-splitting and testy. But that is a misunderstanding of the scribe. Who were the scribes, and what was this man expecting from Jesus?

Scribes were associated with the interpretation and protection of the Law. (In the New Testament "Scribe" is used interchangeably with "Pharisee.")[13] Their origin is unknown, but by the time of Jesus a scribe was a truly powerful person in Israel. Scribes were respected because of one thing, their knowledge. Education began at an early age, and sometimes by the age of fourteen they had mastered the interpretation of the Law. Their education continued under the tutelage of a scribe. Upon learning all the traditional material and methods of interpretation they became competent to make judgments on questions of punishments for crimes and legislation governing religious observances. They then became non-ordained scholars. At the age of forty they could be ordained a scribe with full rights and privileges. As rabbis they devoted their lives to three tasks: "to make...decisions on matters of religious legislation and of ritual, to act as judge in criminal proceedings, and to pass judgment in civil cases either as a member of the court or as an individual."[14]

These men were not necessarily priests. They held positions in Israel all the way from the priesthood to merchants and tentmakers such as Paul.

But it is the scribe's way of thinking and what he was likely to expect of Jesus that interests us. Scribes believed that God made a covenant with his people. The covenant is a contract between parties in which each is mutually bound. God expressed in the written and oral law given to Moses what he requires of his people. Transmitted from Moses through Joshua, the elders, the prophets, the men of the Great Synagogue, the law became entrusted to the scholars, the scribes. Three statements summarize the teaching of the scribes: "(1) God, the Father, so loved the individual that (2) he revealed his twofold law to Israel, so that (3) each individual who internalized this twofold law and obeyed the teachings of the scholar class could anticipate that after death his soul would enjoy life in the world to come, alongside God the Father, and that in the distant future his soul would be restored to his resurrected body."[15] To live in the Kingdom, God's people must observe the Law conscientiously and literally. God is obliged to reward them according to their faithfulness to the Law. Rewards corresponded to the services rendered. If a person or a nation acts according to the Law, God is duty bound to reward them. If they do not he will punish them. There is a correspondence to God's reward/punishment and man's services/lack of services.

If the religious and moral life depends on observance of the Law it is necessary for persons to know the Law. The Divine Law is the Torah, what is written in the Pentateuch, and the oral law. This includes the commands of God that must be obeyed, the judgments made by judges in court cases that are sanctioned by God, the statutes enacted by a lawgiver, and the precepts that apply to the various circumstances in which people find themselves.

Because matters of life and death were at stake, scribes spent enormous energy and time mastering the intricacies and complexity of the Law. They needed two things: a prodigious memory and a keen analytic mind. They needed the memory because they must commit to memory both the written law and oral law. (It was forbidden to write down oral law.) Scribes must also be able to think analytically. The Hebrew word for understanding is bin; this means to separate, to dismember. From this word comes "binah--'understanding, comprehension, discernment, insight'. The Hebrew separates the non-essential and external from the essential and important in order to find the heart of the matter, and, once having found it, to express it as briefly and pointedly as possible."[16] When a difficult case comes before the court the judge may ask advice from a scribe. Since the views of only one scribe cannot be taken as standard, several would meet and discuss the issue in question. Students were often invited to listen to the discussion. Defining the issue carefully required the ability to make fine, oftentimes abstruse distinctions; clarity came through careful definition of the issue. Once the question was defined the relevant points of Law were discussed to determine which were applicable and which took precedence over others. Once the issue and relevant precedents were cited a formula was worked out to answer the request of the judge. These formulas became part of the unwritten law and required accurate memorization. Clearly the scribe's authority to teach and to decide legal questions was dependent on his mastery of the law.

What was the scribe expecting of Jesus? Jesus was a Jew and he was teaching about God and how to live godly lives. Since this required a mastery of the Law, the scribe asked Jesus a question expecting an answer based on the law. Simply put the scribe expected a rational answer based on the Law. The scribe expected Jesus to engage him on the same assumptions the scribe held: the place of the Law in

Jewish life, obedience to the Law, mastery of its contents, keen analytical thinking, and an extraordinary memory. In other words, the scribe expected Jesus to act like a scribe. Let's return to the discussion between Jesus and the scribe.

The scribe asked a question scribes discussed over and over without a resolution: "what shall I do to inherit eternal life?" Meeting him on his own ground Jesus responded with a question: "What do you, a devoted student of the Law, grasp to be the essence of the Law on this question?" The scribe's answer penetrates the heart of the matter drawing on Deuteronomy 6:5, 10:12 and Leviticus 19:18. (Here is an example of the analytical, retentive mind of the scribe.) Jesus' response was simple: "You are correct. Do that and you will have eternal life." Such a succinct discussion that settled an age old question made the scribe seem foolish, or at least he seemed to think so. The text says, "But he, desiring to justify himself..." He probably felt that his authority rested in his skill in handling difficult questions, and his quick give and take with Jesus on one of the most difficult issues made it seem that little or no skill was involved. That can unsettle a person who prides himself in getting the better in a discussion of the law. Here an unlearned, relatively young man, had made quick work of him. Thus, he quibbled over a word in the answer he gave. "And who is my neighbor?"

The scribe probably knew of a debate that centered on the interpretation of Leviticus 19:18, "You shall not take vengeance or bear any grudge against the sons of your own people, but you shall love your neighbor as yourself: I am the Lord." The key issue is who is included in "own people." Pharisees excluded all non-Pharisees and Essenes all "sons of darkness"; renegades, informers, and heretics were to be pushed into the ditch. The view stated in Matthew 5:43 was widespread: "You have heard that it was said, You shall love your neighbor and hate your enemy." The essence of the issue is this: according to the Torah whom must I love and whom not? This was a point of law, and the scribe was ready to debate it. Jesus understood the scribe and took up the challenge. But he did not continue the discussion by debating the Law. Instead he told him a story.

The details of the story or parable were familiar to the scribe and those listening. A man was traveling the long, descending road from Jerusalem to Jericho. He was attacked by robbers who easily lay in wait in one of the many caves close to the road. They took his belongings and clothing, beat him into submission, and left him in a serious condition. A priest, traveling from Jerusalem to Jericho, saw the man and avoided him by passing on the opposite side of the road. Probably after fulfilling his responsibilities in helping conduct Temple worship for the week assigned to him, the Priest was on his way home. His life is regulated by the Law, he obeyed the command of God, "Speak to the priests...that none of them shall defile himself for the dead among his people." (Leviticus 21:1) Likewise the Levite passed the man staying on the opposite side of the road. Possibly he was on the way to the Temple and must not be defiled by a dead man. The Levites' job in the Temple was to be a musician, a janitor, or a policeman. On the grounds of the Law both the priest and the Levite justifiably ignored the man and went on to perform their religious duties. Then a Samaritan passed by and helped the man. After tending to his wounds he put the man on his own donkey and paid an innkeeper to care for him. The priest and levite were close to the top of the social ladder in Israel, but the Samaritan was at the very bottom. If you were not a full blooded Israelite you could be a social outcast and have a place in a social system descending from those who worked at despised trades, Jewish slaves, Israelites with a slight blemish, Israelites with a grave blemish, Gentile slaves, and Samaritans. The descendants of those who remained in Judah during the exile and intermarried with the people in the land were not trusted even though Jews would trade with them. Jews had no social or friendly relations with Samaritans. They did not eat in the same room with them and did not use dishes in common. To the Jew the Samaritan did not live according to the Law and received the judgment of God. Any right thinking Jew who understood the place of the law in his life simply imitated what he believed to be the attitude of God toward the Samaritan.

When he completed the story Jesus asked the lawyer to draw a conclusion regarding who is my "neighbor." On the scribe's own interpretation of the Law he must see the act of the Samaritan as fulfilling the law. To his credit the scribe was consistent with his own interpretation. "Neighbor" means fellow countryman and all other persons as well.

To interpret this saying on the level of historical analysis makes the story only a useful device for driving home a moral point and ignores its literary function. We have seen that a parable is an extended metaphor that functions in part as a weapon of warfare in the hands of Jesus. He used them to attack and subvert the mundane stories of the kingdom held by some Jews of his day. How does this story subvert the story held by the scribe?

When the scribe makes choices and creates a life-structure for himself he does so on the basis of some deeply held theological beliefs. He believes that the covenant is a contract between God and man and that the Law is what man must do to fulfill his side of the agreement. In his mercy God has made a contract with us and the Law has been given. There is nothing more for God to say to us. It is up to us to obey God's commands. If we live according to the Law God will benefit us, and if we do not God's wrath will come upon us. When a problem arises in daily living about what he ought to do the scribe appeals to the Law and depends on his ability to think analytically. Once he has rationally settled the question he acts in accordance with his knowledge of the Law. Jesus is not attacking the scribe's commitment to the Law and to sound thinking; he is attacking the scribe's belief that "rational deliberation over the Law" is all we need to guide our life in the kingdom.

How does the parable function to subvert that "obviously" correct belief? In the mind of the scribe, and possibly those listening to Jesus, Priests and Levites do that which is right; they act according to the Law and inherit eternal life. But the Samaritans do that which is wrong; they do not act according to the Law and will not inherit eternal life. Given the beliefs of the scribe that is the way he expects Priests, Levites, and Samaritans to behave; no other conclusion can be drawn. Yet on the basis of his own interpretation of the law the scribe must draw a conclusion contradictory to the expected one: the priest and Levite do not follow the law and do not inherit eternal life, but the Samaritan does! What Jesus does through story or parable form is force the scribe to draw a conclusion that is a contradiction of his own beliefs. How can he believe that his whole way of thinking is false? It's false, but it can't be false. What Jesus is attacking is the scribe's commitment to the belief that the only way to understand God and how we should live is through his understanding of the meaning of rational deliberation over the law. This way of thinking defines a scribe; Jesus is attacking the man's definition of himself. That definition arises from the mundane story Jesus is attempting to subvert; that way of life has hardened into certainty and Jesus is turning it up side down. But Jesus is also aiding the scribe to hear, to see. God is not only a God of judgment; He is also a God of love. That love cannot be contained within the scribes' narrow conception of "rational deliberation over the Law." Jesus is not saying that acting in a reasonable manner is not part of the Kingdom way. But the scribe's view of reasonableness must expand to include seeing and hearing as well as thinking and doing. Jesus was asking him to take a broader view of the Torah, to be rekindled by the sacred story, to the epiphany of Yahweh.

Now that we have looked at the nature, structure, and function of parable and have one clear example, we are in a position to draw the conclusion that the second premise in a Platonic type argument, that only through reason (philosophy) can stories be evaluated, is false. They can be evaluated, at least in one sense of that word, by means of parable. We have seen that the parable of the Good Samaritan subverts the narrow interpretation of the scribe's horizon; it undercuts the narrative, in this case his mundane story. It seeks to draw the hearer out of his narrow horizon to see another possibility. In the parable we have story evaluating story. And if this analysis of the nature, structure, and function of parable is correct then we do not have to turn to philosophy to evaluate our stories.

While I believe I have made my point, I want to add a short epilogue to this discussion. One implication of the analysis I have developed is that the paraboler attacks story, and that story is something that can be adopted by persons who are attempting to understand the nature of religion. This leaves the separation of poetry and philosophy intact. It can be said that the paraboler can attack story while the skeptic can attack philosophy. Each form of critique is born of its own parents. An interesting topic that should be dealt with is whether or not parable can attack philosophy. But to show that requires a discussion of how philosophy is ultimately rooted in metaphor and how metaphor is the root of story. But that is another paper, a paper on the philosophy of Giambattista Vico.

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1. Stephen Crites, "The Narrative Quality of Experience," *Journal of American Academy of Religion*, vol. 29, no. 3 (September, 1971), p. 295.
2. *Ibid*.
3. *Ibid*.
4. *Ibid*., p. 296.
5. Elie Wiesel in *Messengers of God* (New York: Summit Book, 1976) has done this for many Old Testament stories.
6. C. H. Dodd, *The Parables of the Kingdom* (New York: Charles Scribner's Sons, 1961), p. 7, 8.
7. *Ibid*., p. 7.
8. Joachim Jeremias, *The Parables of Jesus* (London: SCM Press, Ltd., 1955), p. 19.
9. Dodd, *Parables*, p. 5.
10. John Dominic Crossan in *The Dark Interval* (Allen, Texas: Argus Communications, 1975), pp. 64-67, analyzes the parable in the following figures.

Figure 4

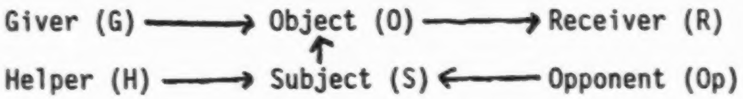


Figure 5

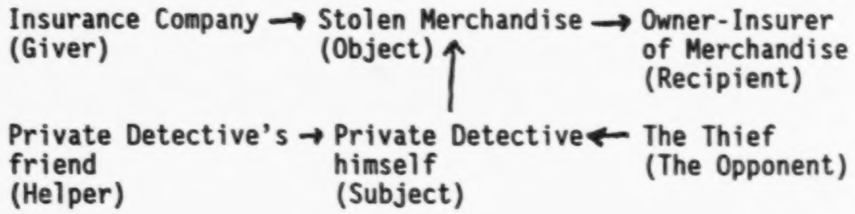


Figure 6

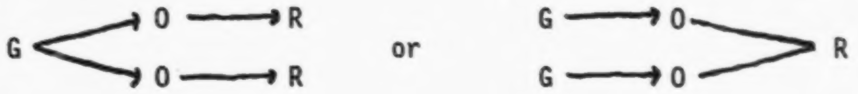
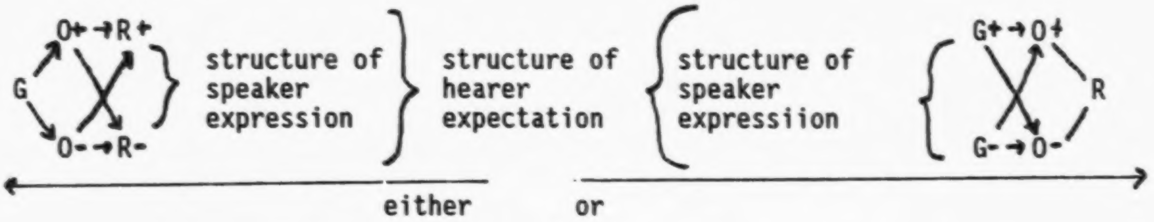


Figure 7



11. Ibid., p. 66.

12. New English Bible, Luke 10:51.

13. E. Rivkin, "Pharisees," The Interpreter's Dictionary of the Bible--Supplementary Volume. Keith Crim (ed.). (Nashville: Abingdon Press, 1976), p. 660.

14. Joachim Jeremias, Jerusalem in the Time of Jesus (Philadelphia: Fortress Press, 1969), p. 236.

15. Rivkin, Interpreter's Dictionary, p. 660.

16. Thorlief Boman, Hebrew Thought Compared with Greek (Philadelphia: The Westminster Press, 1960), p. 203.

HIGHER-ORDER THINKING AND INTUITIVE EXPERIENCE

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I grow increasingly unsettled over the mounting call for the use of computers in the development of higher-order thinking. The concern is not that students will use computers as an aide in the development of certain low-level thinking abilities, or even to teach or model a very limited kind of problem-solving skills. Rather it is that computers will be used as a primary means of nurturing higher-order thinking. That could result in a very restrictive notion of higher-order thinking and in turn limit what teachers do to cultivate that dimension of thought in students.

The problem is aggravated by the excitement generated over the development of new fifth-generation computers systems, "capable of operating intelligently in a manner somewhat like that of the human brain."[1] Excitement is also fueled by items found in the popular literature such as the account of a short story written by a computer and published in Omni Magazine.[2] Even responsible scholars are quick to note that "properly designed [computers] can allow students to formulate hypotheses, test them, analyze results, and refine their conceptions. Moreover, they can provide the student with a record of the course of his or her investigations, permitting greater self-awareness of thinking and learning."[3] Such advocacy is not, by itself, bad. The problem arises only when the thinking nurtured by the computer is viewed as the primary or exclusive kind of higher-order thinking or when the use of the computer inhibits the development of other kinds of thinking of a higher-order.

This present threat is not too dissimilar from that faced by a previous generation in which science was seen as the paradigm of institutionalized rationality. But that limited paradigm of rationality, as Newton-Smith observes, "embodied untenable assumptions concerning the objectivity of truth, the role of evidence and the invariance of meanings."[4] Success in science has certainly led to the adoption of reductionistic notions of rationality. Likewise, present success with the computer and the promise of artificial intelligence may seduce us into accepting a very limited notion of higher-order thinking. This reductionist move could lead to a view of the human mind as an information processing machine in which higher-order thinking is seen primarily as an interrelationship of facts and rules.

One of the best known advocates of the use of the computer in the teaching of thinking is Seymour Papert. In his book, Mindstorms, Papert actively promotes the value of thinking like a computer program, a program that "proceeds in a step-by-step literal, mechanical fashion."[5] Not only does learning how to program the computer nurture high-order thinking, but, in Papert's mind it also helps young people gain a reflexive understanding of their own thinking. The problem is that young people, in thinking about their own thinking, could become seduced into believing that all higher-order thinking is machine-like and can be characterized sufficiently by metaphors drawn from computer technology. I am alarmed by that possibility.

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I want to move in a different direction and affirm that the human mind is something more than an information processing machine and that higher-order thinking extends beyond the mere interrelationship of knowledge and algorithms to reach a solution to a problem. The concern is not that students use the computer to develop a narrow range of logical thought; rather, it is that another mode of intelligent thought and behavior, not encompassed by the computer, willbe neglected or trivialized by students and teachers who have become enamored by the power of the computer.

That other mode of thought is an element in one's own lived-experience that does not easily fit the analytic and procedural model represented by recent technological advances. That mode of thought is intuition. However, using this concept to describe a fundamental element of one's higher-order thinking process makes one quite vulnerable, for it opens the user to the accusation that his intuition is nothing more than imprecise thinking. Siegfried and Theresa Engleman, for example, claim that the feeling of intuition is only a by-product of a very sloppy learning situation which could be very easily cleared up and improved by being modeled after the computer. That feeling is "induced merely by presenting a concept in such a way that the learner must spend an unnecessary amount of time trying to learn it."[6] The Englemans believe that any reference to intuition can be eliminated merely by improving the logical order in which material is presented to the learner. Presumably, that gets rid of unnecessary feelings of intuition and also reduces the amount of time necessary for learning. Even though that argument maybe rejected, one is still faced with the thought that intuition is merely an accelerated, or even unconscious version of analytic thinking or perhaps "a mere speeding up of the analytic processes in which the steps become blurred and difficult to identify . . . because of the speed itself."[7]

Even though the above objections, may be overcome, one still faces the task of being clear about what intuitive thinking is. Because of the difficulty of that task it may be easier to accept the computer as a root metaphor for characterizing higher-order thinking and a useful tool in its achievement. But the price of doing that is high. It means discarding an element of human thought which has been credited over the years with making significant contributions to the world of learning. I am not prepared to pay that price!

The consequences of eliminating intuition from our conception of higher-order thinking is clearly illustrated in the recent National Society for the Study of Education Yearbook on Microcomputers and Education. Janice Patterson and Marshall Smith, in their article "The Role of Computers in Higher-Order Thinking,"[8] have discarded "intuition" as an integral element of higher-order thinking. Their enthusiasm for using the computer in teaching higher-order thinking has entrapped them in a reductionistic view of higher-order thinking. For them, higher-order thinking is that which occurs when a person is engaged in active and sustained cognitive effort directed at solving a complex problem. Problem solving is identified with those activities "such as integrating and synthesizing different bodies of information, making critical judgments, and developing and testing hypothesis."[9] Expanding upon this definition, their implied conception of the human mind takes on the character of an information processing machine comprised primarily of data and the application of rules. From their perspective, a person who concisely, deliberately and with cognitive effort proceeds through a linear series of problem solving steps is thinking at a higher level. With the right amount of knowledge and the proper schema, they believe that any problem can be solved algorithmically. In fact, they try to convince the reader that higher-order thinking primarily involves new ways of interrelating knowledge and algorithms. For example, to encourage higher-order thinking among students, they advocate that teachers give "considerable attention . . . early in the curriculum to the interrelation among facts and rules."[10] The rules that Patterson & Smith refer to are those heuristic strategies or generalizable techniques which artificial intelligence advocates believe can be programmed into computers. The presumption is that these heuristic strategies can be taught through the use of the computer and that these learned formulas or algorithms, as they call them, can then be applied to other domains of learning.

> Students can learn problem solving heuristics and that, if they use these strategies, they are more effective problem solvers . . . . Research on expert and novice problem solvers shows the importance of a solid information base that is easily retrieved in a problem solving environment. The problem solver should be able to retrieve facts and algorithms automatically . . . .[11]

The main purpose of the Patterson and Smith article is to promote those computer activities which they believe will contribute to the development of higher-order intellectual activity. Significant for the development of higher-order thinking are the heuristic tutorial programs which they claim are "specifically designed to teach problem solving strategies . . . . [They create] game-like environment for training and practice in the use of specific heuristics."[12] Computer programs mentioned in this regard are such classics as "Wumpus" which is designed to teaching the rules of reasoning contained in logic, probability, decision analysis and geometry. They conclude that these types of programs "are successful in teaching students to use specific problem solving heuristics within the limited program environments."[13] But, surprisingly, they then proceed to question whether these programs have any effects that generalize to other settings, particularly those where the problems are more complex or less well-structured. Hardly a recommendation for developing higher-order thinking in real-life settings!

Another type of software identified by Patterson and Smith as developing higher-order thinking skills are problem-solving simulation programs. Their examples come from so-called "microworlds" which are sufficiently narrow and which have a rich knowledge base and accepted rules. Such so-called expert systems have received much publicity lately with the development of so-called fifth generation computers. Their developers even claim that these computer systems have reasoning power. In the eyes of their promoters, all such systems need in order to behave like experts are those general rules which capture the thinking of the expert and lots of very specific knowledge in that limited domain. In the case of the example Patterson and Smith give, it is a great deal of specific knowledge about the human body, its diseases and their manifestations as well as heuristic knowledge, i.e., knowledge of good practice and good judgment in the field of infectious diseases. But how do such expert systems cultivate higher-order thinking in the computer program user? As far as I can determine, they simply teach the user a sophisticated set of facts and rules. That seems to occur, for example, with the economics simulation program "South Dakota." Through its use, the student is exposed to those variables which affect a farmer's success. The student makes decisions which determine whether the student-as-farmer will make a profit. The student presumably gains some understanding of the heuristic knowledge or rules of good practice and judgment of expert farmers. But gaining such knowledge and rules does little to nurture a fundamental dimension of higher-order thinking. For that to happen, we would have to be able to claim that this program teaches students to think like expert farmers. But thinking like expert farmers involves significantly more than algorithmic reasoning or procedural thinking grounded in data and rules.

For Patterson and Smith, any person who is thinking at a higher-order level, will consciously, deliberately and with sustained cognitive effort proceed through a linear series of problem solving steps. The novice and the expert both undergo the same mental process. Each draws on the same information base which is retrieved and used algorithemically. The only difference between novice and expert is that the novice must "deal with problems that require organizing information in new ways."[14] ForPatterson and Smith, the novice is thinking; the expert is not. "An expert who very quickly reaches the correct solution to a problem that to others might be complex would not be engaged in a higher-order thinking."[15] Thus, an expert who is able to "short-circuit" the heavily analytic and procedural process which a novice must undergo, would not, from Patterson and Smith's perspective, even be engaged in higher-order thinking. For them, doing something unconsciously is nothing more than routine processing. However, I have difficulty accepting their argument that the highly skilled performer is not thinking at a higher level, or even thinking at all, simply because his behavior is not the product of any deliberate conscious computer-like act.

It is important not only to distinguish between what a novice and expert do, but also to affirm that most expert mental activity is not just routine processing but a valued form of higher-order thinking. It is hard to believe that the expert is engaged in the same kind of deliberate analytical and procedural activity that challenges a beginner. In fact, such deliberate kind of thinking, represented by the novice, could actually be counterproductive for the expert who I believe is operating on a more intuitive level. And it is this latter mode of intellectual operation which I believe is at a higher-cognitive level than the computer-like problem solving ability characteristic of the novice. Would a master chess player, for example, playing multiple games simultaneously, and moving every few seconds, be said to be engaged in higher-level thinking? Under such conditions, the chess expert would simply have no time to collect data, apply rules or even engage in any serious conscious analysis of alternatives. It seems grossly inaccurate to say that the chess master who is exhibiting a high degree of intuitive skill is not engaged in higher-order thinking.[16] But that is the only conclusion Patterson and Smith can reach by limiting higher-order thinking to algorithmic reasoning or procedural thinking.

Patterson and Smith would have us believe that the expert, when he is thinking, is doing so with deliberate conscious effort and with precise recipes for solving problems. But as Hubert and Stuart Dryfus point out, an "expert performer, except of course during moments of breakdown, understands, acts and learns from results without any conscious effort of the process. . . . An expert's skill has become so much a part of him that he need be no more aware of it than he is of his own body."[17] The expert is not engaged in some high-speed theorizing characterized by analytical and procedural problem solving. In fact such activity may act as a series barrier to problem solving.

Conceiving higher-order thinking as similar to that of a computer may be useful in helping young people at the beginning stages of their learning in a particular domain. However, it can become inhibiting as they move toward expertise in a domain. In most domains, expertise is possible only if the "student can quiet the analytical mind and act intuitively . . . . In other domains, one cannot even begin to learn if one thinks of oneself as an information processor and tries to program the computer . . . by extracting a rule that describes the structure of the domain."[18] But Patterson and Smith totally neglect this intuitive dimension of higher-order thinking in favor of cultivating lower-order problem solving. That neglect is harmful to a rich conception of higher-order thinking. It also encourages a conception of the human mind as an information processing machine comprised primarily of data and the application of rules.

What then is the best direction to take in affirming the role of intuition in higher-order thinking? One would be to focus on testimonies about intuition from well known individuals who have made significant intellectual contributions. However, such comments provide little perspective about intuition itself. Another route would be to attempt a formal definition and description of intuition. That approach is well represented by the work of Ned Noddings and Paul Shore. While the Noddings and Shore effort is worthy of consideration by those who already affirm intuition as an element of higher-order thinking, their esoteric analysis would hardly convince those who are presently inclined to link higher-order thinking with computers. For example, they define intuition as

> an object oriented capacity, one that organizes the material of inner and outer perception into representation for both reason and Will. It is driven by Will's quest for meaning. It is, in a deep and poetic sense, the eyes, ears, and fingers of the soul.[19]

While they believe that the Will's quest for meaning is central to the initiation, there is little Noddings and Shore have to say about it. That is because "Will is in itself unanalyzable because it is the driving force behind all analysis."[20] Likewise, with intuition. It too is unanalyzable "because it is the immediate apprehension and organization of material in response to the Will's quest for meaning."[21] But if that is the case, then the only attractive alternative may be simply to examine intuition as a phenomenon which we experience as part of everyday tasks we undertake.

Hubert and Stuart Dryfus, in their book on human intuition and expertise,[22] establish a more healthy balance between calculative reasoning and intuition by linking intuition with that sort of ability people use all the time as they go about their everyday tasks. They argue persuasively that intuition or expert kind of know-how is not capable of being duplicated by a new generation of computers and thus cannot be reduced or decomposed into machine-like activities. They begin their attractive argument by examining the qualitatively different stages that persons go through as they move from rule-guided, "knowing-that" novices to the experience-based, "know-how" of experts and conclude that many of the abilities we develop, as we proceed from beginner to expert, are simply not accessible in the form of facts and rules. It is these abilities or "know-how" which they link to intuition. They acknowledge that beginning learners, "decompose" subject matter into context-free features. Beginners are given rules for determining their actions just like a computer following a program. They characterize this "manipulation of unambigurously defined context-free elements by precise rules"[23] by the novice as a form of information processing. But as persons gain some experience in dealing with real situations, they become aware of many situational aspects. The many features of these real situations can become overwhelming. So in order to cope with this information explosion, individuals adopt some plan to identify and examine only a limited set of factors that are most important for improving performance. At this stage of competence the learners engage in a kind of detached planning, including identification of the significant factors that are relevant to their plans and then follow with an analytical, rule-guided plan of action.[24]

It is this middle stage of "competence" which Patterson and Smith appear to be describing when characterizing higher-order thinking as problem solving. For it is at this stage that individuals establish goals and search for appropriate strategies. Specifically they search for ways to transform certain facts by rule-like procedures into configurations that assist them in achieving their goals. There is nothing wrong with developing this kind of competence as long as it is seen as merely a stage along the way toward expertise. However, Patterson and Smith, along with others, want to stop at this point and claim that this kind of problem-solving is all there is to higher-order thinking. But I have to agree with the Dryfuses, who argue that higher-order thinking consists of intellectual activities which go significantly beyond problem solving, and include the "rapid, fluid kind of behavior that bears no apparent similarity to the slow detached reasoning of the problem solving process."[25] They associate this kind of behavior with expertise. It represents a kind of know-how which can be readily identified as intuition.

As people approach proficiency and expertise in a domain, they begins to "see" present situations as similar to previous ones. Spontaneity in choosing an appropriate plan of action becomes more prevalent. There are longer periods where action is not interrupted by detached conscious planning. Naturally, there will be interruptions of this intuitive seeing. The proficient person will, at times, have to regroup and take a more analytical look. But in the movement toward expertise, the person will experience longer intervals of sustained intuitive understanding which become so great that the expert simply "sees" what needs to be done and does it. The skill is so much apart of the person that one is not even conscious of what is being done. Dryfus and Dryfus argue persuasively that the expert does not, like the beginner simply use "facts and rules as a heuristically programmed computer does,"[26] but rather intuitively sees what to do without applying rules. This description of skilled practice effectively challenges Patterson and Smith's argument that expertise is not only unconscious that expert performance is not only unconscious but analytical and procedural as well.

The significance of the Dryfus argument is that it helps explain why computer-assisted instruction works well for drill-type activities engaged in by the novice and even for problem solving activities associated with achieving competence in a domain. But, if we want our young people to become more like experts, to think like them and to value that mode of thought, then the computer may indeed become a very dangerous companion in the classroom. That is because analytical thinking actually may be counterproductive in developing the higher-order thinking capabilities of the proficient and expert performer.

> While thinking of oneself as a computer acquiring features and procedures might well accelerate the passage from beginner to advanced-beginner stage, and can still be a useful metaphor in passing from beginner to competence, it follows from our model of skill acquisition that thinking like a computer will retard passage to proficiency and expertise.[27]

The computer has become a powerful tool in our society and education is under increasing pressure to incorporate this technological revolution into the classroom. In the face of this swelling momentum to integrate this new technology into our schools, we need to exhibit extreme care. I do not deny that the computer can be a useful tool in schools. But we need to be very aware of the purposes for which we use the computers and the assumptions we make around those purposes. In this paper I have focused on one chosen use of the computer, i.e., to teach higher-order thinking. I have argued that our enthusiasm for teaching higher-order thinking by means of the computer may actually lead to a "minimal vision of cognitive competence."[28] Our success in using the computer to nurture problem solving skills may actually dull our sensitivities to the more elusive dimensions of higher-order thinking. Naturally our vision of things is shaped by our modes of access to those things. To the degree that our primary access to higher-order thinking is through the computer, then our vision of it will shrink. Over a period of time, intuition will be no more, simply because it is not achievable by means of the computer-like thinking.

Notes

1. Ivor K. Davies and Harold G. Shane, "Educational Implications of Microelectronic Networks," Microcomputers and Education (Chicago: The National Society for the Study of Education, 1986), 5.
2. Davies and Shane, "Educational Implications," 11.
3. Janice Patterson and Marshall Smith, "The Roles of Computers in Higher-Order Thinking," Microcomputer and Education (Chicago: The National Society for the Study of Education, 1986), 81.
4. W. H. Newton-Smith, The Rationality of Science as quoted in D. C. Phillips, "On What Scientists Know, and How They Know It," Learning and Teaching the Ways of Knowing (Chicago: The National Society for the Study of Education, 1985), 39.
5. Seymour Papert, Mindstorms: Children, Computers, and Powerful Ideas (New York: Harper and Row, 1980), 27.
6. Siegfried and Theresa Engelmann, Give Your Child a Superior Mind as quote in Nel Noddings and Paul Shore, Awakening the Inner Eye (New York: Teachers College Press, 1984), 2.
7. Noddings and Shore, Awakening, 43.
8. Patterson and Smith, "The Role of Computers."
9. Ibid, 82.
10. Ibid., 89.
11. Ibid., 90.
12. Ibid., 92.
13. Ibid., 95.
14. Ibid., 89.
15. Ibid., 82.
16. Hubert and Stuart Dreyfus, "Putting Computers in Their Proper Place: Analysis versus Intuition in the Classroom," Teachers College Record 85 (Summer 1984): 587.
17. Dreyfus, "Putting Computers in Their Proper Place," 586.
18. Ibid., 597.
19. Noddings and Shore, Awakening, 202.
20. Ibid., 122.
21. Ibid.
22. Hubert and Stuart Dreyfus, Mind Over Machine (New York: The Free Press, 1986).
23. Ibid., 21.
24. Dryfus, "Putting Computers in Their Proper Place," 585.
25. Dryfus, Mind Over Machine, 27.
26. Dryfus, "Putting Computers in Their Proper Place," 587.

27. Ibid., 596.

28. Israel Scheffler, "Computers at School?" Teachers College Record 87 (Summer 1986): 520.

HIGHER ORDER THINKING AND INTUITIVE EXPERIENCE:

A RESPONSE TO STRANDBERG

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Professor Strandberg has chosen a timely topic, for there are many who are sympathetic to his concern over the increasing use of computers in attempts to develop higher order thinking. There is, truly, an inexorable difference between human beings and computers, and many advocates of the computer model of human thinking claim too much too hastily in the way they compare computer logic to human thinking processes. However, I must disagree with Professor Strandberg in how he attacks the problem, for he goes in a direction that obscures as much as it explains.

Basically, Strandberg affirms that the human mind "is something more than an information processing machine and that higher order thinking goes beyond the mere interrelationship of knowledge and algorithms to reach a solution to a problem." He is concerned that other modes of intelligent behavior will be trivialized in the rush of the computer advocates. He mentions that element of "lived experience that does not seem to fit the analytic and procedural model presented by our recent technological advances." He offers intuition as his prime example, but admits some discomfort in taking this approach, for he believes he will be open to the charge that he is advocating nothing more than imprecise thinking.

First of all, I wish to critique Professor Strandberg's paper on what may be an unfair ground, for an author should be free to choose his sources and analyze a problem in any reasonable way he sees fit. However, Strandberg's paper would have been stronger had he linked his commentary with sources from philosophers who stand out for their work on intuition and higher order thinking. Second, he never clearly distinguishes the relationship between intuition and higher order thinking, although his paper contains some apparent assumptions about such relationships. For example, is intuition a feeling process or a higher order thinking process? Are intuition and higher order thinking the same, or are they different? And, if different, do they overlap and intermingle? Strandberg never makes these distinctions. Finally, the terms "intuition" and "higher order thinking" are fuzzy, to be sure, but it is possible to clarify better the nature of that fuzziness by at least a cursory analysis of the terms and their usage in the literature, an analysis which Professor Strandberg never makes. He does refer to psychologist Jerome Bruner's observation to the effect that, "I am not clear what intuitive thinking is even though I know I have it." But this will not suffice, for it does not clarify what intuitive thinking is as a term or in regard to its usage.

Professor Strandberg relies on a recent issue of the National Society for the Study of Education Yearbook, Microcomputers and Education, which he believes clearly illustrates the cost of eliminating intuition from consideration in higher order thinking. While a clarification of this cost is not forthcoming in his subsequent comments, he does present a critique of some of the more important articles. He charges that some authors in the Yearbook, such as Patterson and Smith, portray the human mind in the character "of an information processing machine comprised primarily of data and the application of rules." He takes these authors to task for equating computer drill and practice with the development of higher order thinking, and for

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their claim that higher order thinking for both novice and expert is developed with deliberate and sustained cognitive effort which "proceeds through a linear series of problem solving steps.... The novice and expert both undergo the same mental process." The only difference is that the novice is thinking and the expert is not. Strandberg locates his major objection here, for he maintains that an expert is able to " 'short circuit' a heavily analytic and procedural process which a novice must undergo," and he confesses difficulty accepting Patterson's and Smith's argument, particularly where "the skilled performer is not thinking at a higher level, or even not thinking at all, simply because his behavior is not the product of any deliberate conscious computer-like act." Strandberg then states, "Rather, I would claim that the expert is operating at an intuitive level and that this mode of intellectual operation is at a higher cognitive level than the computer-like problem solving ability characteristic of the novice."

Now, it seems that there may be several kinds of human activity being discussed by Professor Strandberg: there is, first, the deliberate step-by-step thinking of the novice; second, the short circuit thinking of the expert; and third what seems to me can only be called habitual behavior. The major criticism I have to offer is on the latter point, for Strandberg too quickly equates short circuit thinking with Patterson's and Smith's view of habitual "thinking" [1] on the part of the expert. In short, Strandberg confuses habitual "thinking" with what he claims is the higher order intuitive short circuit thinking of the expert. Indeed, what Patterson and Smith are talking about is habitual activity, habitual because the expert is so versed in the procedure, so trained and accommodated to it that he or she can do it without thinking. Furthermore, the proof, so to speak, is found when Strandberg quotes Dryfus and Dryfus approvingly: "'An expert's skill has become so much a part of him that he need be no more aware of it than he is of his own body.'"

It could be argued that short circuit thinking would not be habitual behavior, but the kind of thinking that jumps the customary and habitual, that blows away the chaff obstructing the novice or uninitiated, and that goes to the heart of the problematic situation. It may even be called "creative thinking" or perhaps "intuitive thinking", for it may be more an instance of creative insight or intuition than of habit, unless Professor Strandberg means that intuition is on the level of habitual behavior. If the latter is the case, then how can intuition be equated with higher order thinking, particularly where there is not even any awareness? This simply does not mesh. We are hampered in understanding because Professor Strandberg does not explain clearly what he means by short circuit thinking, intuition, or higher order thinking.

Here we would do well to go to philosophers who are clearly recognized for their contribution to the problems of thinking. One who comes easily to mind is John Dewey. In Human Nature and Conduct, Dewey states that, "Habits by themselves are too organized, too insistent and determinate to need to indulge in inquiry or imagination."[2] Or again, "Knowledge which is not projected against the black unknown lives in the muscles, not in consciousness. We may, indeed, be said to know how by means of our habits."[3]

It seems to me a good argument could be made that higher order thinking is the thinking "projected against the black unknown." It is not the habitual "know how" that lives in our muscles; rather, it is thinking that is typified by heightened awareness and that is forced to be creative and higher order (or intuitive, if you will) just because it treads unfamiliar ground. This is when we must break out of the force of habit and engage in inquiry, and according to Dewey, "Inquiry is the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole."[4] If, then, we get to higher order thinking when we enter into serious inquiry, it is a "controlled or directed transformation" from indeterminate to determinate. It surely will employ hunches, short circuit thinking, intuition, and even some habitual activity, but it will also involve logic, procedure, and rules. This means that public rules and guidelines as well as private internal soliloquy and intuition will play important roles.

In summary, Professor Strandberg has chosen a topic of concern to many educators and philosophers, but his discussion of the issue would be better served, first, by connecting it to pertinent philosophical literature and, second, by some judicious clarification of terms. Finally, he should consider whether he has confused the meanings he seems to apply to these terms with what Dewey, for example, called habitual activity.

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1. I enclose the word "thinking" in apostrophes in this case because habitual behavior involves little, if any, conscious thought.

2. John Dewey, Human Nature and Conduct (New York: The Modern Library, Random House, 1957), 167.

3. Ibid.

4. John Dewey, Logic: The Theory of Inquiry (New York: Holt, Rinehart, and Winston, 1938), 104-105. It should be noted that, for Dewey, inquiry and reflective thought were the same thing, but he used the term inquiry to prevent confusing it with preexisting definitions of thought. (See ibid., 21).

THE BUBER MODEL RECONSIDERED, REINTERPRETED, AND RECREATED

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A sure sign of old age is reflecting on one's past work and career. My last SAPES' paper, "Excellence Reconsidered: Is This Where I Came In?"[1] reflected on the meaning of the "new" excellence movement by contrasting it with the reform movement in the late 50's and early 60's through which I became involved in education and specifically in the philosophy of education. At that time SAPES was such a small organization that it was difficult for me to find and join. Since no one in our present society was a member at that time, I claim to be the oldest member. That reason alone should legitimate my reminiscing about my first paper delivered to SAPES twenty years ago.

In that paper[2], I developed a Buber model for education in which the teacher and student engaged in a mutual examination of central issues in a subject. In this dialogue, the teacher would contribute his expert understanding of the issue and the student her interpretation of the issue drawn from her experience. This paper as revised later was my most successful one judged by the conventions of academic communities. The Buber model was included in *Education Digest* and in two anthologies, criticized in three separate articles, and according to some of my colleagues in education was often cited in pedagogical journals. Certainly, the paper was cussed and discussed.

The cussing and discussing of the Buber model led me to reconsider it many times. The results of these reexaminations form the heart of the book I recently wrote with Algis Mickunas, entitled, *Meaning, Dialogue and Enculturation: Phenomenological Philosophy of Education*.[3] One purpose of this paper is to acquaint you with that book but in an unusual way. I want to share with you how this society and the more inclusive Philosophy of Education Society has helped to clarify and generate my thinking.

As an "old-timer" subjected to much criticism over the years, I have found that the value of most criticism is indirect and comes from fostering criticism of your own work which eventuates in refocusing and recreating

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that work. For example, when I finished reading the paper on the Buber model at Old Dominion University in 1966, I thought that Sam Holton would never stop asking me questions. In all honesty, I cannot remember any of Sam's questions, although I do remember my response to all the questions. I tried to illustrate Buber's interpretation of dialogue by saying that I could respond to Sam as a critic whom I wanted to put down or silence, thus making our relationship an I-It one, or I could respond to him as a fellow seeker of truth who was helping me better understand some perplexing issues in education, thus fostering an I-Thou relationship between us. Perhaps that response failed, because it silenced Sam, thus implying we had entered an I-It relationship. Seriously, Sam's questions forced me to reexamine the purpose of my paper. His questions made clear to me the unclarity of the paper I had read. When I reflected on the paper, I discovered that it addressed two questions which had been major concerns of mine for years and had, in fact, inititated the thought leading to the Buber model. Sam's questioning led me to bring those issues to consciousness. They were "how a teacher whose authority is based on expertise in a discipline can exercise that authority without violating the integrity of the student" and "how one could insure that the I-It theoretical basis for the teacher's authority would not reduce the teacher-student relationship to an impersonal one."[4] Since the foregoing statements of those issues is quoted directly from my recent book, it is evident that those issues have remained major concerns of mine through the years.

The next criticisms of the Buber model which evoked major reconsideration came from members of the Philosophy of Education Society. I remember reading that the next issue of *Educational Theory* would contain criticism of pseudo-existentialists in education. I eagerly awaited that long over-due critique until I discovered that I was one of the four pseudo-existentialists attacked in the article. But that was not all; in the same issue a whole article was devoted to showing that Buber himself would not endorse my Buber model. My response to these criticisms along with an earlier more positive treatment of my model[5] was long in coming. In fact, one of my colleagues introduced me at a SAPES meeting as some one who had restrained himself from immediate criticism in order to savor and strengthen his attack on his critics. Responding immediately to their initial criticisms would have been easy. First, since I was not an existentialist at the time of the writing of the paper, my critic had to transform my work into that of an existentialist, so that I could be labelled a pseudo-existentialist. Second, it was certainly true that Buber would not endorse my Buber model because Buber was not in the business of endorsing, but of dialoging. But actually, I did not make these responses immediately because my critics had once again led me to reconsider my own work. By then I already knew that their primary criticism, though not well developed, was well-founded. I had not adequately explicated Buber's interpretation of dialogue. As one critic put it, I had missed the ontological dimension of Buber's thought. However, my critic was not at all clear concerning the meaning of ontological as it related to Buber's thought. Had he said that by ontological he meant a human way of being in the world, I would not have delayed so long in responding to him. Later I realized that I had misinterpreted Buber's ontology by mistaking his I-Thou relationship for what in our book we called an I-It (Thou) relationship. In our book we contended that sound education requires both relationships but not I-It relationships.

Although my critics did not initially lead me to make that major criticism of the Buber model, they did force me to deal with an issue I already recognized but needed to face. If I had not explicated Buber adequately in the Buber model, what had I done? Actually, my article had not claimed to be an explication of Buber's treatment of dialogue, but, instead, a model in Scheffler's sense of model--namely, the use of a philosopher's thought to clarify an educational process. However, I don't think that Scheffler's contention that a model need not fully or even accurately articulate a philosopher's thought would justify the way that I misused Buber's interpretation of I-Thou relationships. When I reflected on what I had done with Buber's thought, I came to the conclusion that his thought had generated much of the creative thought that led me to the creation of a dialogical model; thus, I had called it a Buber model. This process of how generative spirit can be evoked by the work of philosophers was described in a paper I read at one of our annual meetings.[6] This process is initiated by concern about an issue or problem in education to which some philosopher speaks in a way which generates creative thinking concerning it. Thus, rather than explicating the thought of a philosopher and applying it to an educational issue, creative interpretation and/or resolution of an educational issue is evoked by the work of a philosopher. Thus, if the title of my article had described it accurately, it would have been called, "My Dialogical Model Generated by Buber." This approach to creative work is also developed in my recent book.[7]

Obviously, bringing to consciousness the generative approach to creative work was an indirect result of responding to my critics. The development of the concept of an I-It (Thou) relationship, however, was much more direct. One of my critics had contended that I did not understand the full implications of Buber's treatment of I-It relationships. He contended that Buber believed that I-It relationships were required in impersonal situations such as the study of science. Therefore, my use of Buber's philosophy to attack the impersonal relationships advocated by much of modern educational theory and practice was misdirected. Although Buber did believe that I-It relationships were appropriate in impersonal settings, he also was very much concerned about the modern tendency to replace truly personal relationships with impersonal ones. But what Buber did not develop was an impersonal relationship which prohibited the treatment of persons like things. My Buber model actually implicitly developed this missing ingredient in Buber's thought which later in our book I called an I-It (Thou) relationship. The I-It (Thou) relationship recognizes that other people must be treated impersonally in many situations but that in those situations one should not forget that the relationship is with a person and not with a thing.

I-It (Thou) relationships are very important in education. Positively, they recognize "the student's right to have opinions and to have those opinions acknowledged, the right to question and discuss the grading policy, the right to share in the privileges given to the other members of the class, the right to be graded impartially, and most importantly, the right to be free from humiliation and abuse at the hands of the powerful teacher."[8] As important as I-It (Thou) relationships are to the protection of students' rights, they can not substitute for I-Thou relationships because I-Thou relationships are relationships which affirm the worth of each concrete person and initiate them "into the communion between persons which is necessary to find fulfillment."[9] Thus, both types of relationships are required in education because teachers must both respect the rights of students as persons and must relate to them as the particular persons they are.

Recognition that both relationships are needed does not, however, tell us how to resolve the tension between the two different relationships. All teachers and parents face this tension; every child wants equal treatment and attention, but at the same time they want to be related to as the unique person they are. For example, when a teacher responds to a student who becomes excited by an idea developed in class, the other students label that the student as the teacher's pet. Students want attention when they are distraught or troubled, but they also want equal time from the teacher. Teachers who develop strong personal relationships with particular students know the tension of having to give those students low grades as a result of testing and grading impartially. One disturbing consequence of phenomenological descriptions of ways of being in the world is that one often encounters such tragic situations in which irreconcilable tensions result from two goods. But, in this case, that tension is preferable to the clear choice between relating to persons as persons or as things as implied in

Buber's dictomy between I-Thou and I-It. I-It relationships with the world are required by science and technology. But, how does a teacher help students relate to the world impersonally and not foster I-It relationships between herself and her students. This cannot be accomplished in I-It (Thou) relationships within a dyadic dialogue but it can within a triadic dialogue.

My major reinterpretation of the Buber model incorporated I-It (Thou) relationships and I-Thou relationships within a triadic interpretation of dialogue. One inadequacy of Buber's dyadic dialogue for education was first made evident to me by my graduate students in education, most of whom were practicing teachers. They had difficulty understanding how the various teaching methods they needed to teach students various lessons could be incorporated into the Buber model. At first I attempted to side-step this issue by making dialogue into a principle within which the basic methods functioned. But this proved to be a cumbersome way of articulating teaching.

Another shortcoming of dyadic dialogue was made evident to me by a reconsideration of my criticism of Scheffler. The Buber model appeared in an anthology opposed to Scheffler's rule model of teaching. When I followed the suggestion of the editor of the anthology[10] in which they appeared, it became clear to me that Scheffler and I were talking about different aspects of education. In a paper read at the annual meeting of the Philosopy of Education Society (1971)[11], I pointed out that Scheffler, in contending that teachers should teach their students those principles which were binding on them as experts in a discipline, actually was not talking about teaching, but about what should be taught or curriculum, while I was treating the relationship of the teacher and student or teaching. But I failed to specify that this relationship becomes a teaching-learning one when it is constituted by a transfer of discipline from the teacher to the student. The transfer of discipline can not be a goal of Buber's dyadic dialogue because it presupposes personal relationships like those of friends and lovers which have no end beyond themselves.

My search for a more adequate conception of dialogue took a new direction when my co-author, Algis Mickunas, shared with me some of his writing concerning dialogue. He had developed a triadic conception of dialogue based on the Husserlian interpretation of intentionality. According to Husserl, human consciousness is always a consiousness of something in a horizon of meaning which is intersubjectively developed and shared. This triad formed between man, world, and man initiated the thought that led to our formulation of the triadic interpretation of dialogue which we regard as one of the major contributions of our book. In addition, since the triadic conception of dialogue resolves most of the difficulties I encountered in developing the Buber model, I am including the following extensive quotation from our book which treats it.

> Triadic dialogue focuses on some object or event in the world. The signifying of the object or event by one of the partners establishes the relationship with the other partner. Triadic dialogue does not begin with face-to-face encounter but is concerned with the meaning of something. For example, a four year old child storms up to her father asserting that someone has stolen her puddle. It had been there yesterday. She had played in it, and now it is gone. If her father were to respond to her needs as some educators suggest, he would simply make a new puddle. After all, she regards the puddle as a missing plaything. On the other hand, he could resignify the missing plaything, calling the child's attention to the process of evaporation. By explaining evaporation on the child's level he would be introducing her to a theoretical way of being-in-the-world. She would begin to understand that some events in the world can be understood by scientific explanation. During the re-signification and explanation, he would be a teacher of science engaged as Scheffler suggests in transmitting traditional principles of rational thought. This transmission would take place through triadic dialogue concerned with the meaning of something in the world.
>
> The triadic structure appeared when the father responded to his daughter's concern about the missing puddle. The first step in the dialogue was to point to the significance or meaning of this event by considering it as an example of the process of evaporation. Second, by signifying the meaning of the event--the missing puddle--he oriented his daughter to the process of evaporation as a learner. Third, as he explained to his daughter the process of evaporation by discussing the role of the sun, the formation of clouds and the cause of rain, she responded by asking questions. "Will the clouds in the sky make me another puddle?" Thus, she was able to designate the puddle as the result of a natural process as well as signifying it as a plaything. Fourth, by answering her questions, the father related to her as teacher and, by asking questions and attempting to appropriate his answers, she related to him as student.
>
> The above example makes apparent the triadic structure of

> dialogue. The little girl addressed her father about the missing puddle and the father responded to her by designating the puddle as an example of evaporation. Addressing someone about something and having that person respond to the address is the fundamental structure of all triadic dialogue. In a formal sense, triadic dialogue consists of four interrelated components: (1) A subject is oriented to an object or a state of affairs. By being oriented toward and relating to a thing or a state of affairs, the subject "means" or designates it in a specific way. (2) In so doing, the subject calls upon another person to attend to the object or state of affairs in the way designated. The other person is addressed, not as an object, but as a subject capable of grasping meaning. (3) To the address, the other person responds as a person who has already designated that which is addressed in one way and is attempting to grasp its meaning in a new way. (4) In this exchange each partner becomes aware of himself in relation to that which is addressed and to the other.
>
> Triadic dialogue is educational when one of the partners is an "authority," in that he or she better understands what is addressed than the other, and the other is attempting to appropriate that understanding. In the foregoing example the father recognizes himself as teaching his daughter about evaporation. When she tires of being a student, she might request and receive a new puddle. Then the triad formed by the teacher and student focusing on the process of evaporation would end. She would leave an educational way of being with her father to return to her usual playful way of being with him.[12]

The triadic dialogue is more adequate than dyadic dialogue for teaching because it focuses the dialogue on what is to be taught while retaining a personal relationship between teacher and student. Teaching is a relationship between teacher and student, the purpose of which is learning about the world and self in relation to the world. Triadic dialogue focuses directly on the world rather than through the other person to the world, as in dyadic dialogue. Thus, teachers can use the various methods--presentation, group discussion, peer group learning, and self-directed learning--appropriate to what is being learned. Further, these methods can be personal or impersonal because the method of learning does not dictate the way in which the student and teacher are related as in dyadic dialogue. For example, a teacher can inititate a student to the world through theoretical, abstract (I-It) physics and at the same time relate to the student in an I-Thou or I-It (Thou) manner. Thus, the teacher can initiate students into Scheffler's impersonal principles of science and at the same time relate to the student personally. And when the occasion calls for it the teacher can refocus from the world to the student to give her encouragement. Also, triadic dialogue fosters the transfer of discipline from teacher to student, whereas in dyadic dialogue the teacher merely shares the results of discipline inquiry with the student. Further, the disciplines which are transferred from teacher to student can be either theoretical academic disciplines or the everyday disciplines of the commonly shared world. Triadic dialogue does away with the old dichotomy between subject and student. In triadic dialogue the teacher neither teaches subject matter nor students but initiates students into the world through the disciplined ways of knowing and acting in the world which are their cultural legacy

Obviously, I have learned much from my critics. First, I have learned that well-intended criticism which does not lead to real dialogue often means that the purpose or focus of a paper is unclear, as my response to Sam Holton illustrates. Second, somewhat misdirected criticisms like those that appeared in *Educational Theory* can be very valuable when they encourage you to bring to consciousness the way in which you think concerning certain issues. In addition, they can evoke criticism of your own work which can lead you to see its failings more deeply than your critics did. Third, criticisms of practitioners of philosophical and theoretical work should be taken very seriously by educational philosophers because teaching is, after all, primarily a practice. Fourth, when your work is opposed to strong philosophers, like Scheffler, let their thought criticize your work because that will make you think harder and evoke critical and creative thinking on your part. Fifth, seek out and listen to the criticism and helpful suggestions of friends and colleagues; they give not only encouragement but positive direction to your thought. In summary, be thankful for good critics, listen to them, and respond to them for they will stimulate and improve your thought. But do not take their criticisms at face value or respond to them immediately; instead, search out their deeper meaning for your work, and from them, learn how to reconsider, reinterpret, and recreate your own thought.

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1. John R. Scudder, Jr. "Excellence Reconsidered: Is This Where I Came In?" South Atlantic Philosophy of Education Society, East Carolina University, October 12, 1984.

2. John R. Scudder, Jr. "A Buber Model for Teaching," South Atlantic Philosophy of Education Society, Old Dominion University, October 22, 1966.

3. John R. Scudder, Jr. and Algis Mickunas, Meaning, Dialogue, and Enculturation: Phenomenological Philosophy of Education (Washington, D.C.: Center for Advanced Research in Phenomenology and University Press of America, 1985).

4. Ibid., 26.

5. J. Richard Wingerter, "Pseudo-Existentialist Writing in Education," Educational Theory 23 (Summer, 1973): 240-259; Haim Gordon, "Would Martin Buber Endorse the Buber Model?" Educational Theory 23 (Summer, 1973): 215-223; Edward David Kiner, "Some Problems in a Buber Model for Teaching," Educational Theory 29 (Fall, 1969): 396-403.

6. John R. Scudder, Jr., "William James and Generative Spirit," Twenty-fourth Annual Meeting, South Atlantic Philosophy of Education Society, University of North Carolina, November 2-3, 1979.

7. Scudder & Mickunas, Meaning, Dialogue and Enculturation, 118-121.

8. Ibid., 29.

9. Ibid.

10. Ronald T. Hyman (Ed.), Contemporary Thought on Teaching (Englewood Cliffs, N.J.: Prentice-Hall, 1971), 133.

11. John R. Scudder, Jr., "Initiation Through Dialogue: A Model for Education," Philosophy of Education 1971: Proceedings of the Twenty-seventh Annual Meeeting of the Philosophy of Education Society (Edwardsville, Illinois: Philosophy of Education Society, 1971), 72-80.

12. Scudder & Mickunas, Meaning, Dialogue and Enculturation, 32-34.

THE BUBER MODEL, RECONSIDERED

A RESPONSE

J. Gordon Chamberlin

Our discussion today stems from the fact that when John Scudder and Algis Mickunas were working on a philosophy of education they realized, of course, that they had to deal with teacher-student relations. One philosopher who had made that relation central in his idea of education was Martin Buber, so they chose his focus on "dialogue" as one of the main features in their book. They did not adopt the Buberian view; instead they used Buber as a foil. Buber placed the I-Thou relationship as primary and central because his educational views were rooted in his view of human nature. In I and Thou he held that, "In the beginning is relation."[1] "A person makes his appearance by entering into relation with other persons,"[2] an I-Thou relationship and, "This I lived continually in the relation with man which is bodied forth in dialogue."[3]

In sharp contrast, Scudder and Mickunas address dialogue in the context of pedagogical assumptions. They put it as a question: ". . . how can the teacher exercise the authority required by sound education and at the same time respect the personal integrity of their students and relate to them as persons? We attempt resolution of this dilemma by offering a novel interpretation of teaching as dialogue."[4]

In developing that "novel interpretation" they approach educational issues from a phenomenological perspective. They discuss intersubjectivity, horizon, and lived-world, but their dealing with teacher-student relations is built around their interpretation of intentionality. They note Husserl's point that to think is always to think about something, and transfer this to the teacher role so that to teach is to teach about something. Teachers may use various methods but all involve students looking at the world with a teacher who has "the understanding and procedures necessary to making the world more intelligible."[5] Students "learn from listening to and appropriating his (teacher's) superior understanding of the world and how to communicate about it. This understanding sets him apart from his students and forms the basis for his authority as a teacher."[6]

Say Scudder and Mickunas, "A teacher-student relation is constituted by being directed at the world. It is intentional. Therefore, it requires a triadic structure."[7] By contending that the subject matter or disciplines are a third element in a triadic relation they seem to imply that the educating act is a process of transmission of content.

In this I see somewhat the same assumption that Scudder and Mickunas seem to make about phenomenology. Again and again they write of what "phenomenology does . . ", "phenomenology draws . . ", "phenomenology allows . . ", "phenomenology avoids . . " and so forth. They seem to give a parallel reification to "disciplines" as though they were independent actors sitting at the three-sided seminar tables of academia.

The problem as I see it is that while Scudder and Mickunas give considerable

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attention to teaching as making it possible for students to appropriate into their lived-world the deposit of their predecessors' experiences, they do not give equal attention to the way in which subject matter or disciplines are already incorporated into a teacher's lived-world. What is a teacher's role in relation to content?

For a closer look at that issue Alfred Schutz may be of help. In The Structures of the Life-World Schutz deals extensively with the acquisition of the "social stock of knowledge" in relation to one's "subjective stock of knowledge." Several of his points are relevant here. One is that the structure of the social stock of knowledge "depends, first, on the characteristic features of intersubjectivity, namely, on the conditions of communication -- that is, of the objectivation and interpretation of knowledge,"[8] for "the transference of socially relevant knowledge is anchored in the social structure . . binding the transference of knowledge to social roles."[9]

These statements say to me that inherent to being a teacher is that the social stock of knowledge to be transferred becomes a subjective stock of knowledge to be interpreted. Schutz describes intersubjective relation of the teacher and student this way: "He who transmits his subjective stock of knowledge to Others assumes on the basis of his knowledge about a certain Other or about typical Others that the element of knowledge in question is, or will be, just as relevant for them or their typical problems as it was for him."[10] It is intersubjectivity that makes transfer possible. What happens for a student in an educational occasion (formal or non formal) had previously happened for the teacher for, in Schutz' view, "the life-world is intersubjective from the beginning."[11]

If the sedimentation we have just picked up from Schutzian reflections is relevant, it substantiates my contention that what a teacher does with subject matter cannot be viewed as the transfer of baggage from one container to another, no matter how intricate the appropriation. What a learner confronts at that seminar table is a teacher attempting to share his or her interpretation of social stock of knowledge made subjective stock of knowledge in such a way that it may be valid and relevant for the student's processes of appropriation. An added fillip here is Schutz' contention that while the social stock of knowledge is typified its transference can never be standardized.

Now we can reexamine Buber's view of the teacher-student relationship to see how he deals with a teacher's responsibility for subject matter.

When in 1952 I bought a new printing of his 1937 work, I and Thou, I was entranced by the personal dimension of his extended analysis of two basic "attitudes" expressed in the combined words, I-Thou and I-It. As I go back to it now and review the way he distinguished experience from relation, I also realize that to him both were necessary, primal, expressions of human existence. They can be distinguished as two perspectives, but they cannot be separated. Buber's thinking about dialogue did not end in 1937. He returned to it again and again and the concept expanded. In his book, Israel and the World: Essays for a Time of Crisis, 1948, he speaks directly to our question about the relation of teacher to subject.

> "We have already indicated that in our case teaching is inseparably bound up with doing. Here, if anywhere, it is impossible to teach or

> to learn without living. The teachings must not be treated as a collection of knowable material; they resist such treatment. Either the teachings live in the life of a responsible human being, or they are not alive at all."[12]

While not using "lived-world" language this passage makes clear the assumption that subject matter becomes integral to the teaching role, and that "teacher" and "person" cannot be separated.

In 1966 Buber's The Way of Response appeared and in this work there seems to be a modification of what we had considered a sharp, permanent separation beteen I-Thou and I-It, when he writes,

> "In my thoughts about the life of dialogue . . . We do not find meaning lying in things nor do we put it into things, but between us and things it can happen."[13]

But Buber's most explicit statement about the relation of subject matter to dialogue is in an essay on "Elements of the Interhuman" in the book, The Knowledge of Man, 1965,

> " . . if genuine dialogue is to arise, everyone who takes part in it must bring himself into it. And that also means that he must be willing on each occasion to say what is really in his mind about the subject of the conversation."[14]

What an interesting challenge to a teacher!

It seems to me that these passages all refer to what Scudder and Mickunas could call the lived-world of a teacher, and all undercut any idea that subject matter or disciplines can be seen as somehow separate, a third element, in a teaching occasion. If that element were to stand outside the lived-world of the teacher, would it not also stand outside the student's lived world? And would not the logic of the argument lead to a "quadratic dialogue." Ah, di, tri, quad!

What then is the function of education? For Scudder and Mickunas the function of dialogue has to do with a product -- with a student's "incorporating experiences and views of his predecessors and this expands the student's understanding toward his predecessors."[15] For Buber dialogue emphasizes relation, openness to the other, which yields a "person".

In the end one cannot be sure whether the third element in the triadic idea has to do with authority, with subject matter, with the transfer of meanings, or with the very practical difficulty every teacher has in trying to establish a personal (Buberian?) relation with each of the 25 -- or 140 -- students in a classroom.

Scudder and Mickunas imply by the way they set up problems that this is where a philosophy of education begins, with the very practical questions of a teacher's authority, with expectations of teachers in the existing social world, and with the claims of disciplines. Perhaps from one point of view this expresses a phenomenological concern for "back to the things themselves." But for me it raises more questions than answers.

Nevertheless, we do see that having begun where they did may have kept them from seeing that in some ways Buber's views were closer to theirs than they realized.

Whatever our own views of these matters, Scudder and Mickunas have prompted continued philosophical discussion, and in terms of the theme of this conference, their work is a stimulus to further thinking about thinking.

Notes

1. Martin Buber, I and Thou, Edinburgh, T&T Clark, 1952. 18.
2. Ibid, 62.
3. Ibid, 66.
4. John R. Scudder and Algis Mickunas, Meaning, Dialogue and Enculturation; Phenomenological Philosophy of Education, Washington, Center for Advanced Research in Phenomenology and University Press of America, 1985. 4.
5. Ibid, 40.
6. Ibid, 42.
7. Ibid, 32.
8. Alfred Schutz and Thomas Luckman, The Structures of the Life-World, Evanston, Northwestern University Press, 1973. 305.
9. Ibid, 292.
10. Ibid, 288.
11. Ibid, 15.
12. Martin Buber, Israel and the World; Essays for a Time of Crisis, New York, Schocken, 1948. 144.
13. Martin Buber, The Way of Response, New York Schocken, 1966. 121.
14. Martin Buber, The Knowledge of Man, New York, Harper & Row, 1965. 85.
15. Scudder and Mickunas, Meaning, Dialogue and Enculturation. 58.

ON MAKING THE EDUCATION OF TEACHERS INTELLECTUALLY SOUND

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The title of my presentation is taken from a recently published document called Tomorrow's Teachers: A Report of the Holmes Group. In fact, "making the education of teachers intellectually sound" is one of five major goals listed in the report. In my remarks this evening, I would like to explore this topic, especially as it pertains to the undergraduate preparation of prospective teachers. As many of you already know, the Holmes Group has stirred up a hornet's nest of controversy by recommending that the undergraduate degree in education be eliminated. Members of the Holmes Group believe majoring in a core discipline is the best initial preparation for a career in teaching at either the elementary or secondary level. Are they correct? Should a liberal arts degree be required of all candidates in teacher education programs? What problems would this pose? How does the Holmes Group justify this sweeping change in teacher education? And what, exactly, are the hallmarks of a liberal education? These are some of the issues I will address tonight. But first I think it will be helpful to ask a more fundamental question, namely, "What is the Holmes Group?" I will begin, then, by providing some background information on the Holmes Group Report. I ask those of you already familiar with the report to bear with me as I summarize its major insights and recommendations.

OVERVIEW

The Holmes Group is a consortium of deans of education from major research universities. "Selective" is the best word to describe the group, as membership is by invitation only. Original members were drawn primarily from thirty-eight research universities, while members responsible for writing the report naturally represent an even smaller number of institutions. Presently the Holmes Group is seeking to expand its membership and funding base--just this year 123 universities were invited to become charter members. In addition to paying first-year fees of $4,000, participating institutions are expected to submit descriptions of how they will proceed in implementing the report. Despite recent efforts to enlarge its membership base, the Holmes Group still consists of deans of education from major research institutions. The Holmes Group, then, does not represent the full range of institutions involved in teacher education.[1]

If "selective" is the best word to describe the Holmes Group, then "bold" is probably the best word to describe the group's report, which was published just this spring after nearly three years of deliberation. Certainly, the Holmes Group cannot be accused of advocating piecemeal reform--they call for dramatic changes in teacher preparation and licensure. Judith E. Lanier, dean of education at Michigan State University and acting chair of the Holmes Group, remarked that from the very beginning members called their agenda for reform "Mission Impossible." And what, precisely, is their agenda? Like their namesake, Henry W. Holmes, dean of Harvard's School of Education in the 1920's, they hope to improve the professional status of teaching and teacher education.

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Now, on to some of the particulars. Here are the five goals listed in the report:

- To make the education of teachers intellectually more solid.
- To recognize differences in teachers' knowledge, skill, and commitment, in their education, certification, and work.
- To create standards of entry to the profession--examinations and educational requirements--that are professionally relevant and intellectually defensible.
- To connect our institutions to schools.
- To make schools better places for teachers to work, and to learn.[2]

Laudable goals. At least, I cannot imagine anyone (including the most recalcitrant philosopher of education) objecting too strenuously to them. Not surprisingly, it is the recommendations of the report, not the goals, that have sparked controversy. As I have mentioned earlier, the most controversial recommendation is the elimination of the undergraduate education degree. The Holmes Group believes mastery in the liberal arts is an essential ingredient in the preparation of teachers. Besides implementing more rigorous standards for entry into the teaching profession, the Holmes Group espouses a three-tier system of licensing. The first rank, that of Instructor, is temporary; the other two ranks, that of Professional Teacher and Career Professional, require graduate degrees in education--only these two ranks carry the possibility of tenure. Finally, the deans call for the establishment of Professional Development Schools. Reminiscent of Dewey's Laboratory School, these demonstration sites are aimed at involving novice teachers in model programs rather than merely acclimating them to the educational status quo.

This, then, is a brief overview of the Holmes Group Report. If I had to identify its greatest strength, I would say it is its comprehensiveness. The Holmes Group provides us with a thorough and often biting critique of teacher education programs as they now exist. And the analysis is not limited to undergraduate courses in education; it embraces liberal arts courses as well. More than that, the deans look beyond the colleges and universities to the public schools, which typically fail to ensure that newly hired teachers have meaningful apprenticeship experiences: trial and error learning, not collaborations with veteran teachers, is the rule-of-thumb. The Holmes Group Report thus fixes our attention on the full gamut of experiences faced by prospective teachers. After reading the report, I do not think it will be possible for anyone to equate reform in teacher education with a mere tinkering around with the content and sequence of education courses. Much more is called for.

Undoubtedly, the Holmes Group Report will set the agenda for debates on teaching and teacher education for years to come. Despite its importance, it should not be viewed as a panacea for the educational ills currently besetting us. With this in mind, I would like to call attention to some of the problems attending the most controversial recommendation: abolishing the undergraduate education degree. I believe three objectives must be met before this recommendation is endorsed. First, I will argue that the language in the Holmes Group Report is unnecessarily confusing. Second, I will argue that the report overemphasizes knowledge acquisition as an ain of education. And third, I will argue that the

Holmes Group wrongly assumes that there should be only one model of teacher education. Let me elaborate on each of these, beginning with the first objective.

FIRST OBJECTION

A major source of confusion in the Holmes Group Report is a failure to define key terms. The following passage illustrates this:

> The undergraduate education major must be abolished in our universities. For elementary teachers, this degree has too often become a substitute for learning any academic subject deeply enough to teach it well . . .
>
> We emphasize that no teachers, even the temporary Instructors, should be allowed to teach subjects that they have not studied deeply. Professionally certified teachers should teach only subjects they both know well and can teach well. Eliminating the undergraduate major is therefore only a beginning toward improving the quality of teacher education.[3]

Here the terms "subject" and "academic subject" reoccur, but their exact meanings are not supplied anywhere in the report. The same holds true for "discipline" and "core discipline," which are used in other sections of the report. Are these terms interchangeable? The Holmes Group Report offers us no answer; as a result, it is impossible to evaluate the policy implications of its recommendations. For example, consider business education, a major in secondary education that would be disallowed if the Holmes Group Report were implemented. Should business education students be encouraged to major in business instead? After all, one could argue that business is the "parent discipline" or the "core discipline" of business education. Or is a major in business off limits since business is a professional field of study, rather than an "academic discipline?" The Holmes Report is unclear on these points. Philosophy is another problematic major. Though clearly an "academic discipline," philosophy is not now a certifiable major in most states since it is rarely taught in high schools. Where does the Holmes Group stand on this issue? I do not know. Until these matters are clarified, it is impossible to assess the full impact the Holmes Group Report would have on secondary education.

The matter is equally confusing when we turn to elementary education. How seriously are we to take the Holmes Group's suggestion that all teachers should become subject matter specialists? If this principle is pushed to an extreme, elementary schools would have to be converted into miniature high schools, with students taking classes from a variety of specialists rather than just one or two generalists. Is this desirable? Is this what the Holmes Group has in mind? The report is silent on these issues, even though its recommendation to eliminate the education major would, in fact, have the greatest impact on elementary education. All in all, I think the Holmes Group overrates the value of the traditional academic major, especially for elementary teachers. I agree that these teachers should have more content area coursework, but I believe they would be far better served by an interdisciplinary major. Unfortunately, the Holmes Group does not even consider this option.

SECOND OBJECTION

The second objection I wish to raise concerns the value of a liberal education. Although the deans in the Holmes Group want to replace the undergraduate education major with a strong liberal arts education, they do so for the wrong reasons. In a nutshell, they err by overemphasizing knowledge acquisition. Consider:

> The Holmes Group recognizes the central importance of a strong liberal-arts education in the preparation of teachers. Of all professions, teaching should be grounded on a core of knowledge because teaching is about the development and transmission of knowledge.[4]

There is a profound irony here. On the one hand, the deans pay tribute to a strong liberal-arts education; and on the other hand, they equate this education with "a core of knowledge." But surely the hallmark of a liberally educated person is not mastery of a core of knowledge. It is discernment. Or critical-mindedness. Or Paideia. Or wisdom. Whatever we call this attribute, it involves more than mere learning or knowledge acquisition. On this issue, the Holmes Group has totally missed the mark.

Let me quote one more passage, which I believe further underscores the deans' preoccupation with knowledge acquisition:

> Taking and even passing college and university courses is no guarantee that the material has been learned. Thus, all Instructors should also pass a written test in each subject they will teach, prior to certification. The exam should test for their understanding of the basic structure of the discipline, and tenets of a broad liberal education. They should additionally pass a general test of their reading and writing ability, and a test of the rudiments of pedagogy. These tests would assess reasoning as well as specialized knowledge, general information, and memory. They should be sufficiently difficult so that many college graduates could not pass.[5]

There are many troublesome features in this paragraph. I will mention but one. In their quest for accountability, the deans have adopted a reductionist view of education. They have lost sight of the overriding goals of the liberal arts and instead have focused on whether or not "material was learned in the courses taken." It seems that the tenets of a liberal education are no longer guideposts for learning and living; rather, the tenets of a liberal education have been transformed into test items!

Ironically, the concept of a liberal education presented in the Holmes Group Report is at variance with the views presented in two other reports on undergraduate education, which the deans themselves cite. For example, in To Reclaim a Legacy, sponsored by the National Endowment for the Humanities, William Bennett points out that developing a common curriculum with the humanities at the core is no easy task. More than that, he acknowledges that no single curriculum is appropriate for all places.[6] In contrast, the Holmes Group casually refers to the "historic tenets of liberal education" as if these tenets were a body of fixed ideas.

By far the best and most comprehensive report on liberal education is Integrity in the Curriculum, sponsored by the Association of American Colleges. This document provides even less support for the Holmes Group:

> We do not believe that concern for coverage and factual knowledge is where the construction of a curriculum should begin. We propose a minimum required program of study for all students, consisting of intellectual, aesthetic, and philosophic experiences that should enter into the lives of men and women engaged in baccalaureate education. We do not believe that the road to a coherent undergraduate education can be constructed from a set of required subjects or academic disciplines.[7]

The above quotation hints at a view of liberal education that is much more generous than that reflected in the Holmes Group Report. It is unfortunate that the deans in the Holmes Group did not build on the ideas already developed in Integrity in the College Curriculum. Had they done so, their assessment of the benefits of a liberal education for prospective teachers would have been vastly improved.

THIRD OBJECTION

The third and last objective I wish to raise is this: the Holmes Group assumes there should be but one model of teacher preparation, a model, incidentally, that is best suited for major research universities. This finding is predictable, given the selective membership of the Holmes Group. As Edward H. Berman points out in a recent article, the composition and sponsorship of study groups often determine the parameters within which discussions of educational reform take place.[8] Had the Holmes Group reflected the full range of institutions involved in teacher education, I suspect an entirely different set of proposals would have emerged. I also suspect that the decision to eliminate the undergraduate degree in education would have been more keenly debated. And probably rejected.

Given the prevailing ethos of the Holmes Group, we should not be surprised that its recommendations would spawn numerous benefits for colleges and schools of education in major research institutions, especially since tenure, professional certification, and advancement in a public school career would be inextricably linked to the attainment of graduate degrees in education. Let me state the matter differently: eliminating the undergraduate degree in education has the net effect of drastically reducing the number of institutions involved in certifying teachers. This reduction, in turn, would insure that the remaining cadre of institutions would be in a better position to consolidate power, enforce standards, exert influence, and repel threats of external control. Since these activities are some of the identifying characteristics of professions,[8] I am willing to concede that the Holmes Report may go a long way to increasing the professional status of teaching.

But we must not confuse status with excellence.

I think it premature to embrace one model of teacher education. Surely there is something to be said for a diversity of high quality programs in a variety of higher education institutions. The key to reform in teacher education should be the improvement and enrichment of these programs, not their wholesale elimination. Several arguments can be made to support this view, let me sketch out two. First, there is the issue of equality. Limiting teacher education programs to major research universities will probably result in a decline in enrollments from poor, working class, and minority students, who typically attend other types of higher education institutions in greater numbers. Are the benefits to be gained by implementing the Holmes Group Report worth the restricted access to teaching that will result? Second, there is the issue of excellence. I am not aware of any body of research suggesting that major research institutions do a better job preparing teachers than do other institutions. Moreover, I think we should not overlook some of the exemplary programs in teacher education that are housed in four-year colleges. Though lacking graduate programs, these institutions have other qualities that cannot be replicated by their much larger sister institutions. It is foolhardy, I think, to move to one model of teacher education when we do not yet know enough about the respective advantages and disadvantages of other models.

CONCLUSION

Despite the criticisms I have detailed this evening, I nevertheless recommend the Holmes Group Report. It is a provocative document. Whether or not the members of the Holmes Group succeed in their plans to overhaul teacher education, they have at least made teaching teachers more respectable. And this is no small matter. As Judith Lanier points out in her lucid review of the literature on research in teacher education,[9] one of the chief obstacles to reform is the low status accorded the field. Very few professors are willing to answer "Yes" to the questions: "Are you a teacher educator?" Even though prospective teachers take most of their coursework outside of education, liberal arts professors do not identify themselves as being the primary teachers of teachers. Instead, they shift the responsibility to education professors, perhaps not realizing that in large universities most education professors do not teach undergraduates at all. Worse than that, many of the education professors who actually do teach prospective teachers tend to deny their role as teacher educators. As Lanier astutely observes, foundations professors identify primarily with their disciplines and believe those who teach methods courses are the real teachers of teachers. But most of the faculty teaching methods courses identify with the school subjects of their expertise: they are mathematics educators or reading educators. Who is left? Only a handful of faculty members, many of whom supervise field work in the schools, are willing to publicly identify themselves as teacher educators. A bleak picture indeed. Lanier concludes: "The literature suggests that finding and keeping academically strong and committed teachers of teaching is possibly even more problematic than finding and keeping qualified students of teaching."[10]

Perhaps the greatest promise held out by the Holmes Group is that their report, along with other reports on the declining quality of undergraduate education, may possibly signal a change in the reward system in institutions of higher education. For surely the first step to improving the professional status of teaching and teacher education is to accord teaching more status in colleges and schools of education. If this is accomplished and if more professors, including all of us in this room, are willing to make teacher education a major part of their professional identity, then we may well be on our way to reform in teacher education.

Thank you!

NOTES

1. For more information on the Holmes Group Report, see the April 9 and April 16, 1986 issues of the *Chronicle of Higher Education*. See also the September 1986 issue of *Phi Delta Kappan*.

2. *Tomorrow's Teachers: A Report of the Holmes Group* (Holmes Group, Inc.: 1986), p. 4.

3. Ibid., pp. 14-15.

4. Ibid., p. 63.

5. Ibid., p. 11.

6. William J. Bennettt, *To Reclaim a Legacy* (National Endowment for the Humanities, 1984).

7. *Integrity in the College Curriculum* (Association of American Colleges, 1985), p. 15.

8. Edward H. Berman, "Excellence in Teacher Education: The Necessity of a Critical Perspective," *Educational Foundations* 1(Fall 1986):34-40.

9. For a discussion of education as a profession, see Robert Dreeben, *The Nature of Teaching* (Glenville, Ill.: Scott, Foresman, 1970) and Myron Lieberman, *Education As a Profession* (Englewood Cliffs, N.J.: Prentice-Hall, 1956).

10. Judith E. Lanier, "Research on Teacher Education," in *Handbook of Research on Teaching*, ed. M.C. Wittrock (N.Y.: Macmillan, 1986), pp. 527-69.

LIBERAL EDUCATION AND TEACHER EDUCATION:
WHAT SHOULD THE LIBERAL ARTS CONTRIBUTE TO TEACHER EDUCATION?

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The question posed to our panel "What Should the Liberal Arts Contribute to Teacher Education?" raises three prior questions: (1) What are the Liberal Arts?, (2) What is teacher education?, and (3) Can any meaningful relationship exist between our answers to the first two questions?

The difficulty of discovering a definitive answer to the first question "What are the Liberal Arts?" or "What is Liberal Education?" is amply demonstrated by Bruce Kimball in his recently published book Orators and Philosophers: A History of the Idea of Liberal Education.[1] Kimball's basic point is that "liberal education" embodies in its past two quite distinct traditions and points of view. There is the tradition of the philosophers and tradition of the orators. Both are ideal types abstracted from the positions taken by proponents of each over the centuries.Briefly, the oratorical tradition (artes liberales) seeks to train the good citizen to lead society. This is attained through the prescribing of values and standards for character development and proper conduct and a commitment to the prescribed values and standards which are identified through a study of classical texts. From such study, an elite emerges who achieve merit by adopting the virtues expressed in the texts. Since truth can be known, the task of liberal education is to inform students about the virtues rather than teaching them how to search for them. Education becomes an end in itself, one developes oneself according to standards of excellence for the sake of that development.[2]

The philosophical tradition (liberal-free ideal) emphasizes freedom,especially from a priori structures and standards, intellect and rationality, a critical skepticism, tolerance, egalitarianism, individual volition rather than community obligation, and the pursuit of knowledge as an end in itself.[3]

At present, the liberal-free ideal stresses the development of critical intelligence through specialization in an academic discipline while the liberal arts ideal prescribes the reading of classical texts primarily in order to develop critical intellect.[4] The tension that might exist between the search for truth and the expression of truth in practical affairs is absent. The present dominance of the liberal-free idea and the liberal arts accommodation to that idea means that liberal education today is not building a community where matters pertaining to the good life lived in the good society can be discussed and where men and women can be educated to become creators of that life.

The second question "What is teacher education?" is answered by implication when the first question is answered. In other words, teachers are those prepared professionally to do the work of liberally educating. When we get the first question answered satisfactorily, the second is answered. As noted above, the contemporary emphasis in liberal education is on development of critical intelligence to exclusion of the development of character and virtue. Consequently, current

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proposals for the improvement of teacher education are restricted to the improvement of the teacher's critical intelligence through an academic major, attainment of an advanced degree, and training in those methodologies which will enable teachers to enhance their students' intellectual development. Absent are proposals which would lead to making schools into communities where citizenship is fostered.

The third question regarding a meaningful relationship between liberal arts and teacher education can be answered succinctly. Each without the other is lost. The liberal arts unless taught disappear and teaching which ignores the arts becomes only nurture.

We return to the original question "What should the Liberal Arts contribute to teacher education?" Examination of the history of liberal education suggests that both traditions, the pursuit of truth and the development of citizenship, need to be cultivated in teacher education. Since, at this time, the arts curriculum is neglecting the latter, those of us in teacher education programs should not be blind to this omission. What the liberal arts are not contributing may signal what teacher education must emphasize, namely, the development of teachers who can express the truth we can and do know to a younger generation for the explicit purpose of enabling them to build a better life and society. Let us turn to our panel members for their answers to this question.

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1. Bruce A. Kimball, Orators and Philosophers: A History of the Idea of Liberal Education (New York: Teachers College Press,1986).
2. Ibid., 37-38.
3. Ibid., 119-122.
4. Ibid., 219.

LIBERAL EDUCATION AND THE TEACHER

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Back in 1965, Paul Hirst observed that the term "liberal education" had become a slogan taking on different meanings according to the immediate context: "It usually labels a form of education of which the author approves, but beyond that its meaning is often entirely negatively derived. Whatever else a liberal education is, it is not vocational education, ...or not a specialist education in any sense."[1] If one examines the many criticisms of teacher education today, he or she will likely come away with the impression that Hirst's observation is still an accurate one. Like Hirst, I would also like to take exception with the negatively derived view of liberal education, particularly as it applies to the preparation of teachers, for liberal education is an extremely important part of the professional preparation of teachers even as it may also be the heart of their cultural education. By liberal education, I do not mean simply the derivatives of the old trivium and quadrivium, although liberal education certainly has its roots in that ancient curriculum; rather, I mean those arts and sciences which enable students to gain knowledge of valuable cultural traditions and the social and physical world. Thus, there should be ample liberal education for teachers, but it is insufficient to leave the matter to that recommendation alone.

Ever so often one reads a book that covers familiar ground, but in covering that ground the reader gains understandings not possessed before. Such was the case for me upon reading Bruce Kimball's Orators and Philosophers: A History of the Idea of Liberal Education.[2] According to Kimball, the history of liberal education is the story of a debate between orators and philosophers, but in the twentieth century the philosophers seem to be securely in possession of the upper hand. The oratorical tradition--the artes liberales--emphasizes investigation of the best of tradition and the public expression of what is good and true. The philosophical tradition--the "liberal-free" ideal--embraces the unbridled search for knowledge that liberates the intellect. As Kimball views it, liberal education today is characterized by a confused mixture of the artes liberales ideal and the liberal-free ideal, but with the liberal-free ideal, now characterized by the scientific view entrenched in the great research universities, clearly the dominant interest. Perhaps that should put those of the liberal-free persuasion somewhat at ease, but such is not the case if Kimball's argument is followed. What is lost in embracing the liberal-free view is an anchor securely fixed in studying the Western cultural tradition and public expression, a loosening that is, according to Kimball, having grave consequences in terms of cultural chaos.

This conclusion can be argued with a great deal of force, as Kimball demonstrates, for he offers a fairly compelling case that the liberal-free ideal has, indeed, resulted in cultural confusion, even anarchy. Yet, many people think that what we need is more liberal education, particularly for prospective teachers, and they assume that more liberal education will help solve contemporary problems of cultural confusion. In short, they believe that more liberal education is a good thing, without ever questioning the history of the justifications of liberal education or showing any comprehension of the confusion reigning in higher education curriculum. The calls today for scrapping the undergraduate education degree in favor of a liberal arts degree is but one example. Another equally

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telling development is where traditionalists cry for a sound anchoring in moral traditions both religious and cultural as an antidote to so-called "secular humanists" and liberal-free moral reasoning advocates. However, if one follows Kimball's analysis, a host of problems adheres to any increased immersion of prospective teachers in liberal education, if the immersion is not accompanied by careful analysis and needed clarification. Thus, as requirements in liberal education are boosted for prospective teachers, we would do well to examine the nature of that confusion.

Kimball's contention is that each ideal has valuable points in its behalf. The artes liberales ideal concentrates on cultural traditions, but it runs the risk of becoming elitist and of producing only a backward focus on a selected past. The liberal-free ideal promotes cherished freedom of thought, but it likewise has a weakness in producing a heedless pursuit of knowledge without connecting with the past. As Kimball puts it,

> The contemporary problem, then, of liberal education lies in the paradox that the strengths of its ideal are also the source of its greatest liabilities.... The efforts of many academicians to deny the paradox and to recover the strengths of either ideal without the attendant liabilities contribute to the confusion in current discussions about liberal education.[3]

Kimball views John Dewey as one who helped shape the contemporary liberal-free ideal and, consequently, one of those responsible for the current imbalance and confusion. Yet, my own reading of Dewey leads me to believe that while he vigorously attacked the tendency toward tunnel vision of the artes liberales tradition, his treatment of the paradox noted by Kimball makes him a ready ally in dealing with the problem. For example, Dewey claimed that the school has no moral end or aim apart from participation in social life. He maintained that all education which develops the power to share effectively in social life is moral. Furthermore, while Dewey castigated a single-minded adherence to traditional culture because it idealizes the past and makes the present seem sordid, he also noted that the subject matter of education provides the meanings which give present social life its content.[4] There has to be continuity between the past and present, he argued, and, "The continuity of social life means that many of these meanings are contributed to present activity by past collective experience."[5] What was needed was "...a widening and deepening of conscious life--a more intense, disciplined, and expanding realization of meanings."[6] Speaking of the kind of split in liberal education addressed by Kimball, Dewey stated: "There is on the one side, a body of truth, ready-made, and on the other, a ready-made mind equipped with the faculty of knowing.... Socially, the distinction has to do with the part of life which is dependent upon authority and that where individuals are free to advance."[7] Dewey saw his own view of philosophy being characterized by continuity; thus, the thing to do was to view the oppositions in continuity: "What makes it continuous, consecutive, or concentrated is that each earlier act prepares the way for later acts, while these take account of or reckon with the results already attained--the basis of all responsibility."[8]

These statements by Dewey do not totally relieve him of Kimball's charge that he was one of the chief architects of the current imbalance between the artes liberales and liberal-free ideals, but it does indicate that Dewey was ever sensitive to this kind of dualism. Certainly he was vigilant about the social responsibility of educators. In "My Pedagogic Creed," he eloquently spoke of the responsibility of the teacher "...as a social servant set apart for the maintenance of proper social order and the securing of right social growth," for in this way the teacher "...is the prophet of the true God and the usherer in of the true kingdom of God."[9] That this interpretation of Dewey's views is not too farfetched is bolstered by Lawrence Cremin's observation on this latter passage from Dewey:

> The millenialist tone of these phrases has always left me a bit uncomfortable, but the insight is nonetheless profound. Prophesy: in its root meaning, the calling of a people, via criticism and affirmation, to their noblest traditions and aspirations. Prophesy, I would submit, is the essential public function of the educator in a democratic society.[10]

My point is this: Teachers need a great deal of liberal education, and in the *artes liberales*, else how can they help their pupils to criticize and affirm the *culture's noblest* traditions? But there is the other side of Kimball's paradox, and this is the liberal-free ideal, else how can pupils come to realize their aspirations? The paradox or dualism must not be forgotten, for according to Kimball,

> ...problems have arisen whenever one ideal of liberal education has become preeminent and the dialectical balance between the two ideals has been lost. The balance is to be preserved because it lies in the nature of things so to speak--it arises form the distinction between reason and speech, between *ratio* and *oratio*.[11]

Yet, a polarity remains that makes it too easy to go all one way or the other. It suggests that *ratio* and *oratio* cannot touch or overlap, that reason and speech can have no intercourse. Perhaps Dewey has pointed to a way out: the *continuity* between past and present must be studiously sought.

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1. Paul Hirst, "Liberal Education and the Nature of Knowledge," *The Philosophy of Education*, edited by R.S. Peters (London: Oxford University Press, 1973), 87.
2. Bruce A. Kimball, *Orators and Philosophers: A History of the Idea of Liberal Education* (New York: Teachers College Press, 1986).
3. *Ibid.*, 237-239.
4. John Dewey, *Moral Principles in Education* (Carbondale: Southern Illinois University Press, Arcturus Books Edition, 1975), 11; and *Democracy and Education* (New York: The MacMillan Company, Paperback Edition, 1961), 360.
5. Dewey, *Democracy and Education*, 192.
6. *Ibid.*, 359.
7. *Ibid.*, 335.
8. *Ibid.*, 337. Italics added for emphasis.
9. John Dewey, "My Pedagogic Creed," *Dewey on Education: Selections*, Classics in Education, No. 3, edited by Martin S. Dworkin (New York: Teachers College Press, 1959), 32.
10. Lawrence A. Cremin, *Public Education* (New York: Basic Books, 1976), 77.
11. Kimball, *Orators and Philosophers*, 239.

LIBERAL EDUCATION AND TEACHER EDUCATION:

WHAT SHOULD LIBERAL ARTS CONTRIBUTE TO TEACHER EDUCATION?

Roderic L. Owen
Mary Baldwin College

One certainly could ask if there is anything that the liberal arts have to contribute to programs of teacher education. In theory, at least, teacher education could become almost exclusively a professional area of study throughout both undergraduate and graduate curriculae. Indeed, there are some teachers' training colleges that have come quite close to excluding the traditional liberal arts. In such programs the liberal, or general, education of the student takes place only within the context and parameters of the overarching professional/occupational mission of Teacher Education. Those liberal arts requirements that are mandated--either by external agencies or by the institution's own curricular guidelines--are sometimes fulfilled with such courses as "Children's Literature" (English course requirement), "Philosophy of Education" (Philosophy or Religion course requirement), "Art for the Normal or Exceptional Child" (Art requirement), or "Teaching Social Studies" (Social Sciences requirement). If by "liberal arts" we refer to those non-professional courses in the undergraduate curriculum that do not fall under the purview and control of Education deans and faculty, then for reasons relating more to political power and expediency as well as professional control and identity it may be practical, even sensible, to at least limit if not entirely exclude "liberal arts" from the prospective teacher's course of study.

The initial question could, however, be framed quite differently. We might ask: How can faculty and programs of Teacher Education build upon a solid grounding in liberal arts? Or, even, how can teacher educators contribute to the liberal education of the students? Given the current American political climate--presently not healthy for large professionally-oriented education programs and majors--these, perhaps, are the questions we should pose and attempt to answer. In numerous states, including Virginia, it is now possible and indeed, in some quarters encouraged, to bypass many state-mandated undergraduate education courses and receive teacher certification on the basis of a liberal arts degree, several years of teaching on a probationary certificate, and the successful completion of a much-reduced selection of professional education classes (presumably offered in the evening). The University of Virginia has recently adopted a system in which there is almost no coursework in professional education classes at an undergraduate, Bachelor's level; rather, students complete a traditional, non-professional liberal arts degree and then attend a year consisting entirely of graduate-level education coursework leading to the M.Ed. degree and teacher certification. The overwhelming plethora of 1980's reports on American education[1] offer a wide variety of proposals for change but are almost united in their general recommendation that elementary and high school students as well as college students of education return to basics, to traditional content-area coursework. In the realm of undergraduate teacher preparation a "return to basics" is most often equated with a return to a primary emphasis on a traditional liberal arts education and a rejection of an education major and technical, skill-oriented courses. In short, today there is an uneasy, if not antagonistic, relationship between the liberal arts and teacher education programs--certainly in a programmatic, organizational sense and, perhaps, in a philosophical, mission sense as well.

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Why? Why is Education a professional area of study--so separate from the liberal arts curriculum, from the liberal arts faculty? Certainly, the 20th century rise of disciplinary specializations and professional training has been often remarked upon, if not exhaustively studied by many historians of American higher education.[2] The professionalization of Education is but part of a broader curricular and intellectual shift away from the humanites, liberal arts, and the teaching of humane values, and toward growth in science and scientific method, professional specialization and vocational studies. In this sense, even the traditional liberal arts disciplines--philosophy, history, literature, etc.--are themselves becoming increasingly specialized and narrow in focus. . . contributing less to the overall liberal education of the student as to the advancement of knowledge within the discipline. Bruce Kimball's superb analysis of the history of the idea of liberal education, Orators and Philosophers, opens our eyes to another possible explanation for the antagonism and 20th century shift away from liberal arts toward teacher education and other professional programs of study: At root, we no longer have any idea what is meant by liberal arts or liberal education; our propensity to use those terms interchangeably, along with the expression "general education," is in itself a clear indicator of our great confusion.[3] In this, the most comprehensive and insightful historical analysis of liberal education to date, Kimball might have paraphrased Santayana: we have intensified our efforts, our flurry of hard work and idealistic rhetoric in inverse relationship to our actual understanding of the original meaning and goals of liberal education. Among other matters, we've lost sight of the very likely possibility that--in our Western culture--there have been two quite distinctive, competing visions of liberal education for over 1500 years. Today, educational leaders, philosophers, commentators refer in grandiloquent terms to the classical roots of liberal education and proceed to paint a vision more in debt to modern values and assumptions than actual classical conceptions. We now are blindly reasserting the importance of a traditional model of undergraduate education with no clear conception of the "golden age." To view matters cynically, those of us who are committed to full-fledged professional, undergraduate education programs need not overly worry. In our century we've witnessed numerous attempts to re-establish the primacy of liberal arts--each more desperate than the previous.[4] The messianic, if not martyred, tone is in itself an indication of the desperation and futility of these liberal arts advocates. They are fighting a losing battle in the face of a civilization that values materialism, technical expertise, ever-expanding technology, individual comfort, and social conformity. The undergraduate curriculum is now defined in terms of one's specialization (be it a vocational, professional, or disciplinary major) because there is a lack of faith, vision, and cohesiveness in that "left-over" portion--most weakly referred to as "general" education.

In a moment of despair, the advocates might simply give up--claiming that the liberal arts ideal is now so confused--if not actually outdated--that there is nothing left to struggle for. That would be a mistake. Although Kimball's book is a devastating critique of fatuous, empty liberal arts rhetoric, it is also a statement of renewed faith--but informed, reasonable faith soundly rooted in exegetical research. Liberal education, in the tradition of both the orators (emphasizing the community of language, texts and tradition) and the philosophers (emphasizing the contemplative, abstract search for truth) is, Kimball would argue, the most important educational ideal and practice--lending shape, structure, and value to all the other forms of education. Of all the contemporary American professions--law, medicine, business, social work, engineering, etc.--should it not be that those aiming to become educators themselves and those who teach prospective teachers must readily embrace the broader vision and mission of liberal education? Education understood and practiced solely in a professional or vocational context is skill-oriented, sterile and potentially inhumane; Education viewed solely as another competing academic discipline is over-specialized and burdened with a sense of second-class citizenship; Education as a contributing fabric in the liberal arts mosaic is connected to a broader, overarching educational mission that could inspire, or at least encourage, skills in intellectual judgement; disciplinary depth of knowledge; critical appreciation of the ways we structure, learn, and apply knowledge and information; heightened awareness of social and individual moral challenges; and sensitivity and tolerance of diverse cultures and mores.

We return, then, to the reformulated question posed earlier: How can teacher education contribute to the liberal education of the student? First, most certainly, not by abandoning all undergraduate teaching and becoming exclusively a "graduate-level" profession;that is a model perhaps appropriate for law and medicine--but not for education. Given the limits of time, and space, a brief listing follows of the ways in which teacher educators and teacher education courses could contribute to the liberal education of the student:

--by helping students and teachers alike critically understand the educational enterprise: What are the underlying assumptions, the ultimate goals, the important values, the accepted structures of knowledge, etc.?

--by teaching the numerous forms and levels of critical thinking through offering instruction in teaching methods and skills. As in the old adage: there is no better way to learn than to teach others.

--by breaking down perceived barriers between the traditional liberal arts disciplines and all other areas of knowledge. Whitehead once referred to the "seamless web of learning," making the point that some areas of knowledge traditionally viewed as liberal arts could be taught quite illiberally and that other newer areas (such as Education) may be taught in such a manner as to contribute to the liberal education of the student.[5] In short, liberal education cannot, nor should not, be defined solely in terms of a select number of designated disciplines; attitude, context, and pedagogical process also help define liberal education.

--by illustrating the strengths of interdisciplinary approaches to knowledge and helping bridge the ever-wide gap between educational theory and actual practice.

--by providing examples of fruitful connections between disciplinary expertise, skilled teaching, and psychosocial knowledge of the student and his/her approach to learning.

To conclude, we who are teachers of the history and philosophy of education with concern for "recognizing social, ethical, and legal dimensions of educational policy," "evaluating educational aims in the context of human ideals and social goods," "appreciating the religious and cultural diversity of American society," and "analyzing educational problems from a global perspective"[6] are, at least in terms of philosophical kinship, the natural leaders for healing the wounds and bridging the wide gaps between liberal arts and teacher education. In both a personal and professional context we are most likely to have some access to both realms. Let us make full use of this opportunity now, while the clarion calls for a return to liberal arts (whatever that might actually mean) are loudest and most persistent.

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1. National Education Association, "Studying the Studies" (N.E.A. Background Paper on Instruction and Professional Development, October, 1983).

2. Vide: E. J. McGrath, General Education and the Plight of Modern Man (Indianapolis, Ind.: The Lily Endowment, Inc., 1976).

D. Riesman and C. Jencks, The Academic Revolution (Chicago: The Univ. of Chicago Press, 1968).

F. Rudolph, The American College and University: A History (New York: Random House, 1962).

L. Veysey, The Emergence of the American University (Chicago: The Univ. of Chicago Press, 1965).

3. Russell Thomas, The Search for a Common Learning: General Education 1800-1960 (New York: McGraw-Hill, 1962).

4. Bruce Kimball, Orators and Philosophers (New York: Teachers College Press, 1986).

5. A. N. Whitehead, The Aims of Education and Other Essays (New York: Macmillan Free Press, 1957).

6. Virginia Educational Studies Association, "What We Believe" (Mission Statement, 1983).

TEACHER EDUCATION AND THE LIBERAL ARTS

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Let me begin by adding yet another endorsement to the idea that a strong liberal arts background is indispensable not just for prospective teachers but for students generally, whatever career plans they may harbor. A liberal education, to underline the obvious, is one that develops students' rational abilities, their cognitive skills, the qualities of their minds. It is an education devoted to the cultivation of the intellect, in other words, and it is pursued for its own sake. Its products--knowledge, understanding, intellectual abilities--are good not merely in an instrumental sense for the sake of other values to which they might lead, but good in themselves, intrinsically good.

Knowledge and understanding are also extrinsically or instrumentally good, of course, in that they are means to other values such as freedom. Thus, the claim that a liberal education should liberate is more than a play on words. As Paul Hirst has observed, it has long been a fundamental Western educational tenet:

> Here, then, the Greeks attained the concept of an education that was "liberal" not simply because it was the education of free men rather than slaves, but also because they saw it as freeing the mind to function according to its true nature, freeing reason from error and illusion and freeing man's conduct from wrong.[1]

In addition to freeing the mind from error and illusion, a liberal education might be expected to loosen the intellectual constraints imposed by dogmatism and prejudice, and to foster in its recipients the disposition to act on the basis of reflection rather than on impulse. For as John Dewey has pointed out, a person whose conduct is controlled by whim and impulse "has at most only the illusion of freedom. Actually he is directed by forces over which he has no command."[2] Here, as in so many of his writings, Dewey also distinguishes between negative and positive freedom.

> For freedom from restriction, the negative side, is to be prized only as a means to a freedom which is power: power to frame purposes, to judge wisely, to evaluate desires by the consequences which will result from acting upon them; power to select and order means to carry chosen ends into operation.[3]

This relationship between knowledge and positive freedom takes on added significance in a society that purports to be democratic, for as R. S. Peters has stated, the term "democracy" refers to more than a system of political institutions and processes. It also suggests a social system in which people

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are committed to the determination of public policy on the basis of reasoned deliberation,[4] and such a commitment presupposes an enlightened citizenry, (a presupposition not far removed from the Jeffersonian dictum that a nation cannot expect to remain both free and ignorant).

The case for liberal education thus far advanced pertains, of course, to all students, not just to prospective teachers. I have touched on the intrinsic value of a liberal education for people simply as rational beings, and on the extrinsic value of liberal studies as a means of preparing members of a free society to discharge their civic responsibilities. These ties between liberal education, knowledge, and citizenship are doubly important for teachers, however, since the dissemination of knowledge, after all, is one of the teacher's prime responsibilities. And certainly the fostering of good citizenship is a legitimate goal of schooling, at least to the extent of developing the capacity for deliberation that is required of free citizens.

In addition, the general knowledge and specific intellectual tools furnished by liberal studies are a vital supplement to a teacher's methodological skills and expertise in his or her specialized subject area. Arthur Bestor has noted in this connection that a professional's real value is measurable not so much by what he learns on the job, but by what he brings to his vocation.[5] Equally important is the contribution that liberal studies make to the teacher's capacity to put his or her everyday professional activities into some sort of perspective in terms of long-range educational aims and values. All too frequently our teacher-preparation programs are preoccupied with what is practical and immediately relevant to occupational requirements. Such concerns are perfectly reasonable and appropriate, of course, but they need to be balanced with equal emphasis on the theoretical, more abstract content of liberal studies in order to avoid professional and intellectual parochialism. As Mark Van Doren has argued, teachers need a liberal arts background in order to fully understand what they are teaching and why they are teaching it. Without that understanding, Van Doren thinks, they are not complete teachers.[6]

Van Doren's comment implies that teachers who cannot explain the basis for their practice might be competent technicians but not professionals, and this is a useful distinction. Professional status in most fields is derived in large part from the extent to which practice is related to scholarship and theory in the arts and sciences, thereby enabling the practitioner to understand and explain the theoretical basis of his methodology. If Bestor and Van Doren are correct, it is clear that a teacher needs to be concerned with more than her subject and her ability to transmit that subject to her students.

If we take seriously the task of producing professional teachers, we need to equip them not only to "know that" and "know how" but also to "know why." That is to say, they should know why they are using the methods they have selected. When something goes wrong in the teaching-learning process, a professional ought to be able to diagnose the cause or causes of the difficulty with reasonable accuracy and to prescribe measures of dealing with the problem that are more likely than mere trial and error to lead to a satisfactory solution.

Needless, to say, this is a tall order, and I do not wish to suggest that it can be met simply by a thorough grounding in the liberal arts. I do think, however, that the right combination of liberal studies and educational foundations (educational psychology, history of education, philosophy of education, social foundations of education, etc.) together with some methodological instruction and internship experience might prove equal to the task. If not, it may be difficult to avoid the conclusion that we will have to settle for a technical training for teachers that falls somewhat short of professional preparation.

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1. Paul H. Hirst, "Liberal Education and the Nature of Knowledge," in Philosophical Analysis and Education, ed. Reginald D. Archambault (New York: The Humanities Press, 1965), 115.
2. John Dewey, Experience and Education (New York: Collier Books, 1963), 65. (First published by Kappa Delta Pi, 1938).
3. Ibid., 63-64.
4. R. S. Peters, Ethics and Education, 2nd ed. (London: George Allen & Unwin, 1970), 298-299.
5. Arthur E. Bestor, "Liberal Education and a Liberal Nation." The American Scholar 21 (Spring, 1952), 142.
6. Mark Van Doren, Liberal Education (Boston: Beacon Press, 1959), 175-176.

ARE THERE LIMITS TO MORAL EDUCATION?

Tom Hawkins
University of South Carolina at Spartanburg

Many laymen and philosophers have asked: What does it mean to be moral (or immoral, for that matter)? Can a dog, an infant, or a profoundly retarded person perpetrate a moral or immoral act? Doubtless most would say, probably not. Why? Simply because none possesses sufficient intelligence to consider the consequences of his actions; he cannot act deliberately and hence we cannot hold him responsible for what he does because he does not and cannot "know better." We see then that whatever other criteria are required of moral/immoral acts, such acts require at least some substantial degree of knowledge and intelligence to guide them--or put even more succinctly, moral agents must be able to act "intentionally."[1]

Suppport for this position is lent by G. Simpson who allows that: "The concept of ethics is meaningless unless the following conditions exist: (a) there are alternative modes of action; (b) man is capable of judging the alternatives in ethical terms: (c) he is free to choose what he judges to be ethically good."[2] But even more, R. Straughan informs us that any truly moral decision which becomes an action must meet the following criteria: (1) It must emanate from free choice; (2) must be intentional, from independent judgment; (3) must be uncoerced by another agent; (4) the reasoning behind the decisions must be of a general or disinterested kind (i.e., logical, not emotional); (5) reasons must be expressible in terms of rules or principles which the individual is prepared to apply to other situations; and (6) the agent must undergo some degree of caring enough about the consequences to act upon the decision.[3]

So if the above criteria are sound, we see that moral decisions leading to moral actions must be intelligently and logically (cognitively) connected to outcomes; they must be based on some degree of emotional involvement and caring (affectively); and obviously they must have some tangible affect on another person, positive or negative (so they also have a social component, as well.)[4]

Now, setting aside the affective and social ramifications of moral/ethical decisions for the time-being, I'd like to pursue this cognitive aspect and discuss its relevance to moral education and bring in some research which has a clear bearing on policies and practices vis-a-vis moral education. About two decades ago Lawrence Kohlberg indicated that moral decisions were in part cognitive and developmental in nature, and that like Piaget before him, such decisions could be catagorized into a hierarchy of invariant states beginning with relatively simple reasoning and progressing to ever more complex reasoning. That is, whatever else is required of moral decision-making, Kohlberg found that it was absolutely necessary to possess certain cognitive powers prior to making progressively more complex moral decisions. But it should be pointed out that even though cognitive development is necessary for moral development, it is not ipso facto sufficient for it.[5] Of course, anyone familiar with this position knows that it was nothing new, for Piaget had said the same thing earlier, but he had only a scant empirical base upon which to ground his theory and he failed to elaborate upon the scope and variety of moral stages, at least to the extent to which Kohlberg was able to do.[6]

But both Kohlberg and Piaget agree that moral conduct, in its highest sense, requires rather complex, abstract, more mature, "formal" cognition; and without such cognition, an individual is not and cannot become morally autonomous, and a lack of such autonomous decision-making ability would indicate a failure to meet the pivitol criteria of Simpson and Straughan.[7] This raises a serious question for both curriculum and instruction with respect to moral education: namely, since research informs us that most elementary level and at least half of the secondary level students have not advanced to the "formal operational" or abstract level thinking that full moral thought and action requires, and that moral development tends to lag behind cognitive development, can we teach children and adolescents to be fully moral--or at least to reason that way? I contend that given what research has found on cognitive development of children and adolescents in the USA, for a vast majority--probably at least 90% of children at the elementary level and for at least 75% at the secondary level--we cannot.[8] Again we cannot simply because in order to become fully moral (in our previously noted sense), a child or adolescent requires not only a rather complex, abstract reasoning capability, but also sufficient experiences at working through, and exchanging ideas about, moral dilemmas--experiences which require time, effort, and patience on the part of not only the student, but of the teacher as well.[9]

Now some whom I would refer to as "educational optimists" would tend to eigher ignore or discount the research in this area and argue that the moral education of children and adolescents in our schools simply requires time, technique, and perseverence, and then virtually all students could be brought to the highest levels of moral thinking. But if the research is valid, it would appear that even if instruction were "adequate" to the task, it would be futile unless the student were "ready" and such readiness requires minimally a rather sophisticated level of cognitive complexity: furthermore other evidence shows that such readiness and complexity appear to be as much, or more, a matter of maturation of the central nervous system as it is a matter of experience or training.[10] In the same vein, additional research informs us that unfortunately some children and adolescents appear not to acquire such requisite cognitive complexity, no matter what we provide for them in instructional experiences.[11] In fact, what the problem of moral instruction poses is not necessarily what the schools and teachers do or fail to do, it is at least in part what the problem of human intelligence poses: fundamentally, it is the perennial question of why are some human beings (at all ages) more able to learn cognitively-oriented subject matter than are others?[12]

Although this is an extremely controversial subject, socially, politically, economically, and for a host of other reasons too numerous to mention here, and one that probably many researchers may have an interest in but for "personal/professional" reasons steer clear of, nonetheless, considerable research has been conducted on this subject for the past half century or so the findings of which are interesting, indeed. I am referring to the research of A. Jensen, H.J. Eysenck, R. Hernstein, and many others who have found through a review of a host of studies and through the use of highly refined statistical procedures that an hypothesis which states that hereditary (primarily genetic) variables seem to outweigh those of the environment when it comes to explaining why it is that children and adolescents perform well, or poorly, in school; and why it is that they also perform correspondingly well, or poorly, on both academic aptitude tests and on achievement tests as well. Put differently the research on human intelligence and especially the kind of cognitive learning aptitude and ability required in our schools--at all levels--has tended to show that schools, teachers, or varied "experiences" cannot do very much if anything to boost cognitive learning ability, even though rather heroic attempts have been made to do so.[13] The findings of such research reveal that probably hereditary factors play a stronger role in the development of human cognition than do environmental factors.[14] In other words, the rate and degree of cognitive development in human beings tends to respond less to environmental intervention and more to simple maturation; and the cognitive development both Piaget and Kohlberg told us was required to teach the higher stages of moral development may not be amenable to instruction, no matter how intensive or sophisticated.

Of course we could simply ignore the heredity hypothesis altogether. But to do so, I think, condemns us to that age old, rather worn, and even delusory, ideological notion that all learners can learn all things no matter how subtle or complex--including moral principles and their applications--and that all we need to do is find the right kind of instructional techniques to bring these learners up to our expectations, moral or otherwise.

The reality of the matter and few would argue with it is that most theoreticians interested in the subject of human cognitive ability admit that human cognitive learning ability and its various correlates is a result of both hereditary and environmental factors, and that from a scientific standpoint what is at stake is what percentage each plays in human learning and behavior.[15] Now on this score not only Jensen, but many other educational psychologists have determined that from at least half to as much as 90% of the variance in cognitive ability is attributable to hereditary variables.[16] Jensen in fact claims that about from 75 to 80% is closer to the mark.[17]

Of course there is a host of other thinkers from varied backgrounds who not only disagree with the work of the so-called hereditarians, but they even claim that they are either misguided, unscientific, racist, or all three.[18] But in reading the criticism, I find that a good deal of their criticism hinges much more on ideology than on careful analyses of the research and its methodology.[19] For example, S. Gould in his book, THE MISMEASURE OF MAN, perpetrates the age-old "bad seed" fallacy by claiming that because the research of a century or so ago was unscientific, misguided, and largely political in nature, so therefore the research which came after WWII must also follow the same pattern.[20] It simply doesn't meet the criteria of sound logical reasoning. The rules of the scientific game require criticism of both data and method in order to demonstrate invalidity of conclusions assertions. And in reading a good deal of the literature on this subject since 1960, I see no data or arguements which discredit Jensen, Eysenck, or Herrnstein; and much more to support their findings.

In any case, what can we conclude from all this? It's difficult to say, given the on-going research in the area of the "causes" of human cognitive ability and the hereditary and environmental factors which bear on its development. However, regarding policies and practices concerning the "teaching" for moral development there are two things we ought to consider: First, and probably foremost, we must recognize that teaching (or instruction) is, and can only be, an environmental phenomenon. That is, the process of teaching is chiefly one of manipulation of that part of an organism's (the student's, in our case) environment which has as its goal to produce learning in said organism. And this places the teacher in the role, like it or not, of the "practical environmentalist," since the teacher, qua teacher, can do utterly nothing about a student's hereditary make-up, but has at his/her disposal only the environment with which to work to produce any kind of learning in the student--cognitive or otherwise. But perhaps equally important for the long term, the second consideration we might want to suggest is that perhaps due to individual differences in cognitive learning ability--which may in fact be due in large measure to hereditary differences not all, perhaps not even a majority of students in our schools can be taught to be fully autonomous moral agents. But if not fully moral, what? I would suggest that moral training be aimed at least at the Kohlbergian stage IV or "Law and Order" orientation. Why? For at least two salutory reasons: (a) because here evidence shows that a vast majority of our students, especially at the secondary level, can and do become fully "concrete operational" in their thinking and hence are therefore able to reason morally at the Kohlbergian level IV or "law and order" level , and (b) this cognitive/moral orientation would imbue the student with at least a sense that "People ought to obey the law." Think about it. If we could instill such an orientation in a large majority of our students and fellow citizens, we would encounter what I believe would be a vast improvement over what we are witnessing in the modern day in many quarters of our society--namely a deplorable increase of serious crimes against people and property and a general disregard for the law, rendering many of our homes, streets, neighborhoods, and schools increasingly precarious places to be.

To put the above in different words, I am saying that the "causes" of human cognitive learning ability notwithstanding, our curricula and instruction in our schools ought to be focused on an all out attempt to provide those experiences for all students which will bring them up to the highest moral developmental level possible. But after making such heroic attempts we ought not be too surprised if only a few students reach the complex moral level described by Simpson and Straughan. And who knows, perhaps the scientific engine will someday provide us with some magic chemical injection, electrical stimulus, or surgical procedure, or some other biological, chemical, or physical technique which will make every student fully, autonomously "morally educable" buy bringing him/her up to a full functioning Piagetian "formal operational" cognitive level. For if we could do this, then, and only then, could we begin to aim at that lofty ideal of teaching "all men and women to become fully moral men and women," moral in the very highest and best sense.

NOTES

1. Tom Hawkins, "The Sex Educator as Misdirected Moralist," PROCEEDINGS, SAPES, 1977, pp. 39-42.
2. Simpson quoted by Theodosius Dobzhansky, "Evolutional Roots of Family Ethics and Group Ethics," THE WORLD AND I, March, 1986, p. 188.
3. Roger Straughan, CAN WE TEACH CHILDREN TO BE GOOD? (London: George Allen and Unwin, 1982), pp. 82-3.
4. Hawkins, pp. 40-1.
5. Lawrence Kohlberg, "The Cognitive-Developmental Approach to Moral Education," PHI DELTA KAPPAN, March, 1975, pp. 670-7.
6. Jean Piaget, THE MORAL JUDGMENT OF THE CHILD (New York: The Free Press, 1965).
7. Joseph Reimer, et al., PROMOTING MORAL GROWTH: SECOND EDITION (New York: Longman, Inc., 1983) pp. 17-83.
8. Richard and Norman Sprinthal, EDUCATIONAL PSYCHOLOGY, A DEVELOPMENTAL APPROACH: THIRD EDITION (Reading Massachusetts: Addison Wesley Pub. Co., 1981) pp. 216-7.
9. Sprinthal, pp. 200-23.
10. Arthur Jensen, STRAIGHT TALK ABOUT MENTAL TESTS (New York: The Free Press, 1981) pp. 68-72.
11. Arthur Jensen, "How Much Can We Boost IQ and Scholastic Achievement?" HARVARD EDUCATIONAL REVIEW, Winter, 1969, pp. 59-62.
12. Arthur Jensen, EDUCABILITY AND GROUP DIFFERENCES (New York: Harper and Row, 1973) pp. 1-27.
13. Jensen, "How Much...Achievement?" pp. 2-5; and Jensen, STRAIGHT TALK...TESTS pp. 186-90.
14. Jensen, "How Much...Achievement?" pp. 46-59.
15. Theodisius Dobzhanshy, "Differences are not Deficits," PSYCHOLOGY TODAY, December, 1973, pp. 97-8.
16. H. J. Eysenck, "Don't Talk Nonsense," THE HUMANIST, January/February, 1972, p. 15.
17. Jensen, STRAIGHT TALK...TESTS, pp. 102-7.
18. See, for example, a discussion of Jensen's "How Much Can We Boost IQ and Scholastic Achievement?" in the HARVARD EDUCATIONAL REVIEW, Spring, 1969, pp. 273-421.
19. See, for example, William F. Brazziel, "A Letter From the South," HARVARD EDUCATIONAL REVIEW, Spring, 1969, pp. 348-56.
20. Alex C. Michalos, IMPROVING YOUR REASONING (Englewood Cliff, New Jersey: Printice-Hall, Inc., 1970) p. 54.

RESPONSE TO

ARE THERE LIMITS TO MORAL EDUCATION?

John U. Davis
Bethany College

It seems to me that papers like the one just presented by Dr. Hawkins are very important to the philosophy of education. The paper strikes me as being very provocative. It deals with serious issues that are not part of our everyday discourse. I am particularly interested in the fact that educational philosophers are looking at psychology, the progeny so many years ago of philosophy.

This respondent certainly does not intend to disagree with the analysis of the components of moral reasoning presented here. In fact, I argued at this meeting last year that reason was not only a key component of moral education but that it was the one component with which the school, the public's school, should be concerned. I will still contend that reasoning, thinking if you prefer, is the main business of the school.

Dr. Hawkins, it seems to me, raises two main issues in this paper. First he contends that most people do not reach the higher stages of reasoning described by Lawrence Kohlberg. The higher stages of reasoning require what Piaget called hypothetico deductive thinking, usually referred to as formal thought. While concrete thinking limits the person to seeing an issue as black or white, right or wrong, formal thought gives one the ability to look at many aspects, the various ramifications of each and to view the outcome from various perspectives. These skills are necessary for what Kolberg called post conventional or autonomous reasoning. This reasoning may well have at its base the law and order perspective of an earlier stage but it recognizes that laws are enacted with a purpose. When that purpose is not being achieved by the law citizens should work to change the law. This reasoning chain requires the ability to keep several aspects of an issue in mind at once. That's formal thought. On the other hand, the adult who claims to be scrupulously fair because he treats everyone equally and insists on absolute equality without consideration of intention, size, age or any other factors is demonstrating concrete rather than formal thought.

Second, he contends that the reason that most people are not able to think conceptually is genetic and not amenable to change through the environmental influence of the school. In less elegant terms one might say, "You can't make a silk purse out of a sow's ear."

I really doubt that either of these premises would get much of an argument from a teacher of mathematics. The calculus is not attainable by all. Because they cannot think conceptually in mathematics some adults surreptitiously count on their fingers when they attempt to do the subtraction in their check book. The history teacher also recognizes that not all students think conceptually in his subject when he asks them to identify similarities between two different historical events. The concrete thinker sits with pencil ready to write THE right answer and may become quite irritated if none is forthcoming.

This situation exists. Many people are not able to think conceptually while they are in the charge of the public school. In fact the work of William Perry at Harvard suggests that the situation may be even worse than stated in this paper.[1]

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He found that very few of the seniors at that institution were using what we might call mature conceptual thought. My concern then is not with the thesis of this paper, not with the research cited to document the contentions. My concern is with the implied conclusion which seems to me to be unnecessarily pessimistic, almost nihilistic, and with the presentation itself.

The presentation of the two main points, that not everyone reasons conceptually and that the reason for that lack has a strong genetic base, carries an overtone that approaches author bias rather than reasoned inquiry. He suggests that "educational optimists" ignore the data, ie., his "conclusions," and that this is an "extremely controversial subject," one that many professionals will "steer clear of" for "personal and professional reasons." I cannot imagine that. Should I have checked the audience before the session began? Should I now ask that the doors be locked? There is only one way that these two basic points can be controversial, and that is if they are misapplied.

I do remember being offended by Jensen's 1969 article in the Harvard Educational Review.[2] I was astounded when talking with Kevin Marjoribanks in the early seventies about his research showing that IQ subscores varied by race or ethnic background even when socioeconomic status was accounted for.[3] I remember thinking that the old saw that the Chinese were good with numbers now had some empirical validity. But neither of these people suggested then or now that ALL people in that race or ethnic group were the same. When that research is cited to support compensatory education or preferential treatment on the basis of race or ethnicity there is and well should be controversy. But that is not the case here. Hawkins is not suggesting that we should lump people by race, that we should stereotype and not look for what has come to be called a normal curve. He is simply suggesting that schools cannot make a silk purse out of a sow's ear. The implication that there is something sinister and dangerous about these ideas, in this application, bothered me.

For the purpose of this response, let me accept the contention that ninety percent of measured (predicted) aptitude and ninety percent of measured IQ come from a genetic base. Does that suggest that we should give up the effort to stimulate conceptual thought entirely? If it is not possible to stimulate moral reasoning I must wonder where the last generation of moral reasoners came from, where indeed you came from.

There seems to be a shift in the language of the paper at this point. The author never defined the term education but this last section implies that we are to indoctrinate. The author calls for, "moral training," not moral reasoning and suggests that we "instill"an orientation to a certain concrete rule that, "People ought to obey the law." If I am correct that the language chosen indicates the intent, and it indicates that we are simply to tell young people the right answer, then I must wonder where the next generation of moral reasoners will get the help it needs in this crucial work.

Let me return to the teacher of mathematics mentioned earlier - the one I suggested would not be surprised that not all students will be able to achieve at a high conceptual level in mathematics. That teacher has many colleagues who gave up trying to help students see the beauty and organization of mathematics. Rather than saying, "My that's an interesting way to represent long division, can we think of some other ways to represent what is happening when we divide?", the teacher complains, "Tell your Father that's not the way we do it here." Many teachers have given up on teaching conceptual understanding. They may believe in it in their heart of hearts but only right answers will count when the achievement tests are graded. I would suggest that many history teachers also see their job as teaching the facts. Doing history, investigating primary documents, developing thinking skills are nice diversions but teaching the rule, the shibboleth answer to historical questions is the proper goal, and success will be measured on the test. I would suggest that this paper puts us in that same position in terms of moral education. Education which involves reasoning is difficult. Not all students will achieve at the same level at a given time. Some may never manage the calculus or Kohlberg's stage five. But I cannot stand idly by and allow moral education to abandon the goal of raising conceptual understanding. Remembered right answers will not suffice.

When the student does not grow in conceptual understanding it's not the genes which are at fault. Despite the fact that not all students will reach the same height, physical skill or conceptual level; despite the fact that we in the school control only ten percent of the variable in measured achievement, the school still has a charge to do its job. The school should still take children where they are and facilitate conceptual development. It may be that Mr. Hawkins felt he anticipated this argument in his paper when he referred to the "educational optimists" who feel that "time, technique and perseverence" are all that is needed to bring all students to the highest levels of thinking. I doubt it, however. The proposal most like that, in my experience, is Mortimer Adler's Paideia proposal. Adler simply argues, as I do, that the proper goal of the school is to stimulate thinking in the populace, not to indoctrinate certain current right answers or rules. All students will not achieve the highest levels of thinking. They should, however, be given a chance to develop some facility.

I feel at this point like Socrates, in MENO,[4] as he argues that there are different goals of education and that they require different procedures. If our goal is to turn out a uniform product with a uniform set of beliefs then there is no need to design educational strategies which will foster growth from where the student is to more mature conceptual positions. No need to work to find ways to help students consider alternatives, consequences, develop principles. It is enough to tell them that the law is there and it must be obeyed. I have no doubt that most Americans think the goal of education is to get higher scores than the Russian children do on achievement tests. What I am referring to as moral education may not be possible in American schools to-day. Thinking does take time, technique, and perseverence as Mr. Hawkins suggested the "educational optimist" would report. That time can be better spent if our goal is simply the raising of test scores. But also like Plato, as he develops the argument in MENO, I am convinced that rules and other externalities are less important than the awakening of the inner capacities of man. Virtue is not learned and remembered. Virtue is constructed.

I agree that few of my students will achieve the complex moral level that Hawkins began his paper with. I am often amazed though with the ability young people have to jump steps that it took me years to go though. I find young people in their late teens who have achieved an insight that I and my peers did not recognize until a much older age. I do not share the negative tone of Dr. Hawkins paper. I am his optimist, maybe. But if we fail to facilitate the conceptual growth of young people, if we continue to accept the realist notion that all knowledge must be reflected in the score of an achievement test and that other school activities are frills, if we continue to speak of the basics without recognizing thinking as the most basic of them all, I will place the blame on our faulty conception of the educational enterprise, not as Mr. Hawkins seems to, on our genes.

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1. William Perry, Jr., Forms of Intellectual and Ethical Development in the College Years, a scheme. (New York: Holt Rinehart and Winston, Inc., 1970).

2. Arthur Jensen, "How Much Can We Boost I.Q. and Scholastic Achievement?" Harvard Educational Review (Winter 1969):59-62.

3. Dr. Marjoribanks was then teaching in the Division of Education Studies, Oxford.

4. Benjamin Jowett, Translator, Plato's Meno (New York: The Liberal Arts Press, 1949).

SOUTH ATLANTIC PHILOSOPHY OF EDUCATION SOCIETY

ANNUAL MEETING
OCTOBER 10-11, 1986
LOYOLA COLLEGE OF BALTIMORE

THINKING ABOUT THINKING

FRIDAY, OCTOBER 10

10:00-1:00 Conference Registration. Earl West, Treasurer.
Joe Congleton, Archivist.

Beatty Hall First Floor

1:00-2:30 First Concurrent Session

1. "Philosophy for Children and the Critical Thinking Movement" Robert J. Mulvaney, U. of South Carolina, Columbia

   Respondent: John Haynes, James Madison U.

   Jenkins Hall 217

2. "Theoretic Education" Virgil Ward, University of Virginia, Emeritus

   Respondent: Earnest Marshall, East Carolina U.

   Jenkins Hall 303

3. "A Case for Teaching Students to Think Critically in the Disciplines" Neal Mucklow, U. of Richmond

   Respondent: Roderik Owen, Mary Baldwin College

   Jenkins Hall 306

2:30-2:45 Refreshments

Beatty Hall 234

2:45-4:15 Second Concurrent Session

1. "Parabolic Critique: Understanding Parable" Tom Buford, Furman University

   Respondent: David Mielke, Appalachian State U.

   Beatty Hall 307

2. "Thinking, Artificial Intelligence, and Intuitive Experience" Warren Strandberg, Virginia Commonwealth University

Respondent: Sam Craver, Virginia Commonwealth U.

Beatty Hall 19

3. "The Buber Model, Reconsidered" Jack Scudder, Lynchburg College

Respondent: J. Gordon Chamberlin, Greensboro

Beatty Hall 304

4:15-4:30 Break

4:30-6:30 KEYNOTE ADDRESS

"Teaching Critical Thinking Through the Disciplines: Content Versus Process" John McPeck, U. of Western Ontario

Respondent: Kingsley Price, Johns Hopkins

Beatty Hall 234

6:30-7:30 Social Hour, Cross Keys Inn, Woodland Room

7:30-9:00 Banquet, Cross Keys, Banquet Room

PRESIDENT'S ADDRESS

"On Making the Education of Teachers Intellectually Sound" Jeanne Pietig, Utah State University

SATURDAY, OCTOBER 11

9:00-10:30 Panel Conference

"Liberal Education and Teacher Education: What Should the Liberal Arts Contribute to Teacher Education?"

Moderator: J. Don Reeves, Wake Forest University

Panelists: Peter Carbone, Wake Forest
Samuel Craver, Virginia Commonwealth
Roderik Owen, Mary Baldwin

Beatty Hall 234

10:30-10:45 Coffee Break

Beatty Hall 234

10:45-12:15 Third Concurrent Session

1. "Moving Minds or Driving Disks: Analyzing Assumptions of Information Processing Learning Theorists" Beatrice Sarlos, Loyola College

Respondent: Lee Richmond, Loyola College

Beatty Hall 115

2. "Are There Limits to Moral Education?" Tom Hawkins, U. of South Carolina, Spartanburg

Respondent: John U. Davis, Bethany College

Beatty Hall 234

12:15 BUSINESS MEETING

Beatty Hall 234